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An Examination of Maslow's Need Hierarchy in a Civil Service Setting.

Frederick Hilliard Cain

Louisiana State University and Agricultural & Mechanical College

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**AN EXAMINATION OF MASLOW'S NEED HIERARCHY
IN A CIVIL SERVICE SETTING**

A Dissertation

**Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy**

in

The Department of Management

**by
Frederick Hilliard Cain
B.B.S., Tulane University, 1970
M.B.A., Louisiana State University in New Orleans, 1971
December, 1974**

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Appreciation to my wife, Geneva, comes last because I find it difficult to find sufficient words. Hopefully now that this dissertation is finished, I can keep some of those promises I made to "make it up to you" for the many hours of neglect while this dissertation was being written.

Frederick H. Cain

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Abstract

The study tested the validity of Maslow's hierarchy of needs theory and Porter and Lawler's motivation model on a sample consisting of 258 white-collar, lower level, state civil service employees of Louisiana State University. Instruments similar to Porter and Lawler's questionnaires were utilized to gather data on need fulfillment, satisfaction, and importance; self-ratings of effort and of performance; pay importance; pay as a satisfier; role perceptions; and perceived importance of needs in Maslow's hierarchy if working in private industry.

Needs were ranked in importance similar to Maslow's ranking: (1) physiological; (2) security; (3) social; (4) self-actualization; and (5) esteem. Correlations between the satisfaction of each need and the degree of importance placed on the various needs did not support a two- or five-level hierarchy of needs for Maslow's earlier theory. Maslow's later theory was supported by the statistically significant positive correlations between esteem satisfaction and its importance and between self-actualization satisfaction and its importance. The importance placed on needs while in the civil service system was compared with the perceived importance which would be placed on these needs if in private industry. Security, social, and esteem needs were found to be perceived as more important in the civil service setting ($p < .01$). Physiological and self-actualization needs were perceived to be more important if in private industry, but only the difference for the physiological need was significant ($p < .05$).

The predicted relationships between the variables in Porter and Lawler's model were also investigated based on self-ratings of performance and of effort. The findings indicate that for the sample in this study and the measures used, no statistically significant relationships existed between: (1) value of reward and self-measures of effort; (2) role perceptions and self-ratings of performance based on high and low self-measures of effort; (3) self-ratings of performance and rewards; and (4) perceived equitable rewards and satisfaction. The research found high effort-reward probability to be related to high self-ratings of effort; inner-directed role perceptions related to high self-measures of performance; and high self-ratings of effort related to fulfillment of higher level needs. The relationship of abilities and traits to performance, the feedback loop at the connection of performance and rewards to perceived effort-reward probability, and the feedback loop from satisfaction to value of rewards were not tested.

The sample ranked the following traits as being most necessary for success in their present civil service positions: (1) cooperative; (2) self-confident; (3) adaptable; (4) tactful; and (5) agreeable. Therefore, the sample can be classified as exhibiting "other-directed" traits. Research indicated that the sample did not perceive rewards as being contingent upon performance. This may have been a result of the pay and promotion policies of the organization in the study. The study was concluded with implications for the civil service managers, the limitations of the study, and areas for future research.

Chapter I

Introduction

"The motivation of any organism, even the simplest one, is at present only partly understood?"

James Deese

The driving forces within an individual that motivate him to act are called needs. They directly influence an individual because they partially determine his thoughts and actions. A person's needs act as the forces that dictate his behavior when they work together with his emotions and other psychological functions.

A person can be motivated to fulfill his needs only as he sees them. He is motivated by what he himself wants, not by what others think he ought to have.¹ A person's needs or wants are also unique since they are determined by his biological and psychological makeup, and by his learning experiences. A person may also perceive different needs at different times. Since each individual is unique and his needs differ, he is in the best position to judge what will motivate him. However, there may be times when an individual may not be aware of the forces that are motivating him. Maslow states that:

¹Keith Davis, Human Behavior at Work: Human Relations and Organizational Behavior, 4th ed. (New York: McGraw-Hill Book Company, 1972), p. 16.

since . . . goals are not often seen directly in consciousness, we are at once forced into the necessity of dealing with the whole problem of unconscious motivation. Careful study of the conscious motivational life alone will often leave out much that is as important as or even more important than what can be seen in consciousness. Psychoanalysis has often demonstrated that the relationship between a conscious desire and the ultimate unconscious aim that underlies it need not be at all direct We may then assert that sound motivation theory cannot possibly afford to neglect the unconscious life.²

PURPOSE OF STUDY

The objective of this study is to add to existing knowledge in the field of organizational behavior by viewing the perceived needs and attitudes of classified, white-collar, Louisiana State University, civil service employees toward certain characteristics of their civil service positions. This study will serve to offer empirical evidence to refute or verify Maslow's hierarchy of needs theory.³ In addition, this study will test certain hypotheses of the Porter and Lawler model of motivation⁴ on rank and file employees.

² Abraham H. Maslow, Motivation and Personality, 2nd ed. (New York: McGraw-Hill Book Co., 1970), p. 22.

³ Abraham H. Maslow, "A Theory of Human Motivation," Psychological Review, 50 (1943), pp. 370-396.

⁴ Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968).

In order to test Maslow's theory and the Porter and Lawler model, this study will investigate:

1. Whether a need hierarchy exists for the civil service employees surveyed.
2. The degree of importance that the sample places on each of the needs in Maslow's hierarchy.
3. The degree to which the needs in Maslow's hierarchy are fulfilled and satisfied on the job.
4. The sample's self-ratings of quality of job performance.
5. The sample's self-ratings of the amount of effort expended on the job.
6. The traits which the employees surveyed feel are most important for success in their present civil service positions.
7. The role that pay as a satisfier plays as a motivator for differential performance and differential effort expended on the job.
8. The importance which the employees surveyed place on the needs in Maslow's hierarchy while presently in the civil service system will be compared with the perceived importance which would be placed on Maslow's needs if the sample were in private industry.

HISTORICAL PERSPECTIVE OF MOTIVATION THEORY

The hierarchy of needs theory of Maslow⁵ and the Porter and

⁵Maslow, "A Theory of Human Motivation," op. cit.

Lawler model of motivation⁶ which are examined in this study both see attitudes as being related to motivation. However, Maslow's concepts are based on drive theory while Porter and Lawler's concepts are based on expectancy theory. Both drive and expectancy theory can be traced back to hedonism, but there are some major differences between these two theories. Therefore, before Maslow's theory and Porter and Lawler's model are empirically investigated, it is necessary to review the theories which have formed the bases upon which these two concepts are built.

Drive Theory

One of today's two dominant theories of motivation, drive theory, can be traced back to ancient Greek philosophical writings on hedonism, and later to the ideas of two British philosophers of the 18th and 19th centuries, Jeremy Bentham and John Stuart Mill.⁷ According to the principles of hedonism, behavior is directed toward pleasure and away from pain. Since these authors never estimated what people anticipated to be the consequences of their acts, their theory did little to further our understanding of how these choices came to be more or less desirable.⁸

⁶Porter and Lawler, op. cit.

⁷William Scott and Terence R. Mitchell, Organization Theory: A Structural and Behavioral Analysis, rev. ed. (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1972), p. 76.

⁸Ibid.

Thorndike's "law of effect" later shed some light on how these choices were made. This law stated that behavior that is rewarded tends to be repeated, while unrewarded behavior does not tend to be repeated.⁹ Like the principle of hedonism, the law of effect does not explain why certain events are pleasurable or not pleasurable, but it does explain present behavior in terms of past consequences.

Hull extended the law of effect by stating that behavior is determined by the product of drive strength and habit strength (drive X habit).¹⁰ Drive strength is composed of variables which are a function of the amount of physiological need deprivation and the incentive value of consequences of an act. Habit strength refers to past learning and the frequency of previous stimulus-response connections.

Drive X habit theory has been used to explain and predict repetitive, production-type work behavior, and has been cited as support for piece-rate incentive programs; but it has had limited application to complex, judgmental behavior associated with managerial positions.¹¹

⁹Edward Lee Thorndike, Animal Intelligence: Experimental Studies (New York: MacMillan, 1911).

¹⁰Clark L. Hull, Principles of Behavior (New York: Appleton-Century-Crofts, 1943).

¹¹Vance F. Mitchell, "Expectancy Theories of Managerial Motivation," Academy of Management Proceedings (August, 1971), p. 210.

Motivation in the Pre-Classical Management Era

Motivation in the pre-classical management theory era and early factory days was based on an "economic man" concept. Under this concept, it was thought that monetary incentives would bring out the best in a worker and that he would work harder to get more. Both positive and negative motivation were also used in those days, and the factory owners and religious leaders joined forces to develop a factory "ethos" similar to the Protestant ethic. It was felt that this would lead workers to link their job performance to their confidence in being one of God's "elect."¹²

The piece-rate system or payment by results, provided positive motivation and was at the time, a major break with tradition. By 1833, 47.5 per cent of the cotton mill workers in Great Britain were on a piece-rate system.¹³ Problems later arose when employers increased the rate of production required to earn the same amount of pay, or decreased the amount of the piece-rate paid on each piece produced. This often led to the deterioration of the quality of work, and employer-employee friction arose over the standards of production and computation of payment.

¹² Daniel Wren, The Evolution of Management Thought (New York: The Ronald Press Company, 1972), p. 302.

¹³ Sidney Pollard, The Genesis of Modern Management: A Study of the Industrial Revolution in Great Britain (Cambridge, Mass.: Harvard University Press, 1965), p. 190, quoted in Wren, op. cit., p. 51.

Negative motivation often took the form of disciplinary fines levied for tardiness, singing, swearing, or being drunk. When considering wages in those days amounted to only two or three dollars a week, a fine of 40 or 50 cents was a fairly large portion of a worker's pay.¹⁴

Motivation in the Classical Management Era

Under classical management theory, employees and their production activities were still considered economic factors of production, just as were land and capital. Hence, the factory owner used the same economic analysis on his employees as he did on the other factors of production. The employee was still thought of as an "economic man" who was best motivated by money. Because of this view of the employee, financial incentives formed the motivational backbone of the classical management theory era.

Transition Period

There are several people in management history who provided links between the "economic man" of the classical era and the "social man" of the neo-classical era. The approaches that these men used to span the gap between the two eras of management history varied, but their contributions were all important to the development of management thought. The contributions these four people made in the area of employee motivation are taken from Wren.¹⁵

¹⁴Wren, p. 51.

¹⁵Ibid., pp. 206-207; 314; and 350-351.

Henry DeMan. In 1929, DeMan preceeded Herzberg's method¹⁶ of investigating worker motivation by 30 years by asking German workers to state their own feelings about their daily work.¹⁷ His conclusion was that man naturally seeks "joy in work." Although his sample size was limited, DeMan's findings were quite similar to the later two-factor theory of motivation advanced by Herzberg.¹⁸ Both investigations traced positive motives to the work itself or to the job content. Negative factors were attributed to the job environment or context. DeMan saw work itself as a motivator and felt that the worker should find joy in work.¹⁹

Whiting Williams. Williams quit his position as personnel director with the Hydraulic Pressed Steel Company in order to study blue-collar working conditions from the inside.²⁰ He discovered that incentive plans were not always effective because the absolute amount of pay received was not as important to the worker as was

¹⁶Frederick Herzberg, Bernard Mausner, and Barbara Synderman, The Motivation to Work, (New York: John Wiley and Sons, Inc., 1959).

¹⁷Henry DeMan, Joy in Work, translated by Eden Paul (New York: Holt, Rinehart and Winston, 1929).

¹⁸Herzberg et al., op. cit.

¹⁹Wren, op. cit., p. 206.

²⁰Whiting Williams, Mainsprings of Men, (New York: Charles Scribner's Sons, 1925).

the amount received in relation to what other workers were getting. By working in groups composed of his peers, the worker was found to obtain social status and a feeling of self-worth. Williams learned that the worker based his actions on emotion, sought social security from his peer group, and considered the content of his job more important than monetary rewards.²¹ These observations contradicted the opinion held by some people that the worker was a rational economic man.

Chester I. Barnard. Barnard, president of New Jersey Bell, and author of The Functions of the Executive, felt that an organization should provide physical and social inducements to individuals.²² These inducements would act as repayment for the sacrifices individuals made by participating in that particular organization and not others. Barnard said that obtaining the individual's willingness to participate in the organization involved the "economy of incentives." This consisted of offering objective incentives and persuading subjective attitudes to change. Objective incentives included monetary, nonmaterial, and "associational" (social compatibility and participation in decision making) rewards.²³ Persuasion sought to change the attitudes of individuals through direction, suggestion, and example.

²¹Wren, op. cit., p. 207.

²²Chester I. Barnard, The Functions of the Executive (Cambridge, Mass.: Harvard University Press, 1938), pp. 85-86.

²³Wren, op. cit., p. 314.

Henry Dennison. Dennison, who had been a pioneer in the installation of the Taylor system in his own manufacturing company, had a unique view of motivation:

Four general groups of tendencies which may actuate a member of any organization are: (1) regard for his own and his family's welfare and standing; (2) liking for the work itself; (3) regard for one or more members of the organization and for their good opinion, and pleasure in working with them; and (4) respect and regard for the main purposes of the organization Only when impelled by the four combined can all of a man's power be brought into steady and permanent play.²⁴

Dennison also modified jobs so they would be more satisfying and proposed non-economic incentives which built loyalty when properly mixed with financial incentives.²⁵

Motivation In The Neo-Classical Management Era

Since motivation based on the worker being a rational, "economic man" was proving unsuccessful, new research was conducted during the neo-classical era which seemed to indicate that non-economic incentives were also required to prompt increased worker productivity. Research indicated that: (1) workers wanted to be recognized as unique individuals; (2) the social aspect of the work group ranked above the work; and (3) workers desired to participate in decision making.

²⁴Henry S. Dennison, Organization Engineering (New York: McGraw-Hill Book Company, 1931), pp. 63-64, quoted in Wren, p. 351.

²⁵Wren, op. cit., p. 351.

Managers were now also required to possess social skills in order to satisfy individual and group needs. It was assumed that if managers satisfied needs, workers would reciprocate by increasing their productivity.²⁶

Need Theories. Drive theory, discussed earlier in this chapter, forms the basis for various need theories of motivation. Drive theory was initially concerned with only physiological needs, but was later expanded to include the social and psychological needs of people.²⁷ Need theory works counter to classical management theory's view of money as the primary motivator of employees. It concedes that money can satisfy some needs, but contends that workers are motivated primarily by the desire to satisfy a hierarchy of needs.

A review of the literature on motivation reveals that authors do not agree on a generally acceptable classification of human needs, but this seems to be only a semantics problem.²⁸ There is,

²⁶ Ibid., p. 296.

²⁷ Scott and Mitchell, op. cit., p. 77.

²⁸ For example, Scott and Mitchell, op. cit. use basic drives, primary motives, and derived motives; Herbert G. Hicks, The Management of Organizations: A Systems and Human Resources Approach (New York: McGraw-Hill Book Company, 1972) uses biological and social needs; Joe Kelly, Organizational Behavior (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1969) uses physiological and psychogenic needs; B. Berelson and G. A. Steiner, Human Behavior (New York: Harcourt, Brace, and World, Inc., 1964) uses physiological and psychogenic needs; and Davis, op. cit., uses primary and secondary needs.

nevertheless, general agreement on the needs contained within each author's own particularly named classification. Physiological, biological, primary, or basic needs require satisfaction or fulfillment for survival. They include food, water, rest, oxygen, avoidance of pain, elimination, and a satisfactory temperature. These needs are common to all men, but requirements differ with each individual.

Psychogenic, social, or secondary needs are not directly related to the survival of man. Therefore, the degree to which these needs can serve as motivators varies greater than the degree to which biological needs vary as motivators. Social needs appear after biological needs have been satisfied and include the need for love and affection, social acceptance, recognition, achievement, power, and self-fulfillment.

All need theories are based on certain propositions. First, no need can ever be completely satisfied; hence, only partial fulfillment of a need is required before another need is allowed to appear. Second, needs are constantly changing within an individual, and they are often hidden from one's consciousness. Third, since needs work in groups, rather than alone, they are often interdependent. An example might be the fact that how a person satisfies his biological need for food often depends on his social needs as determined by his social-economic status.

Maslow's Hierarchy of Needs Theory. One of the most popular theories of human motivation was formulated by Abraham H. Maslow in 1943.²⁹ Maslow's 1943 theory is based on the following propositions:

1. Man's needs are arranged in a hierarchy of importance, ranging from the lowest need--Physiological--to safety, love (social), esteem (ego), and self-actualization. This hierarchy of "prepotency" or urgency of satisfaction means that the most urgent need will monopolize the individual's attention while less prepotent needs are minimized, even forgotten.

2. Man is continually wanting; therefore, all needs are never fully satisfied. As soon as one need is satisfied, its prepotency diminishes, and another need emerges to replace it. This is a never-ending process which serves to motivate man to strive to satisfy his needs. A later writing by Maslow modifies this concept of prepotency for people who are predominantly growth motivated.

In such people gratification breeds increased rather than decreased motivation, heightened rather than lessened excitement. The appetites become intensified and heightened. They grow upon themselves and instead of wanting less and less, such a person wants more and more The person rather than coming to rest becomes more active. The appetite for growth

²⁹ Abraham H. Maslow, "A Theory of Human Motivation," Psychological Review, 50 (1943), pp. 370-396. Other motivation theories are available. See, for example, H. A. Murray, Explorations in Personality (Fair Lawn, N. J.: Oxford University Press, 1938), which lists a large number of human needs.

is whetted rather than allayed by gratification.³⁰

3. Once a need is fairly well satisfied, it no longer motivates behavior. Man is then motivated by the next higher level of unsatisfied need, but can be motivated in a reverse direction if a lower-level need is threatened. For a man who sleeps regularly and adequately, sleep ceases to be a motivator. But if a person has not slept for two days, his needs for companionship, self-esteem, and recognition are at a minimum and his need for rest is his primary motivation.

4. The needs are interdependent and overlapping as shown in Figure 1-1. Since one need does not disappear when another emerges, all needs tend to be partially satisfied in each area.

Physiological Needs. As mentioned before, physiological needs must be satisfied in order to sustain life. Included on this level are air, food, water, sleep, elimination, mating, and temperature regulation. These needs take precedence over other needs when they are not gratified. A person who lacks food, safety, love, and esteem would probably seek food more strongly than anything else.

When a man is dominated by a certain need, his thoughts for the future also tend to change. For an extremely cold man, his ideal can be defined as a place that is warm. He thinks he would

³⁰ Abraham H. Maslow, Toward A Psychology of Being (Princeton, N. J.: D. Van Nostrand Company, Inc., 1962), p. 28.

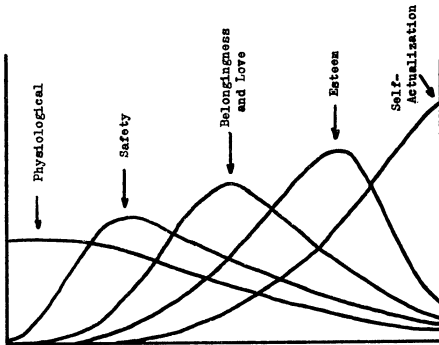


Figure 1-1: RELATIONSHIP OF NEED LEVELS

When the peak of a need is passed, that need ceases to motivate behavior. The next need level then begins to dominate. Even though a need is satisfied, it still influences behavior because the needs are interdependent and overlapping.

From David Krech, Richard S. Crutchfield, and Egerton Ballachey, The Individual in Society: A Textbook of Social Psychology, (New York: McGraw-Hill Book Company, 1962), p. 77.

be perfectly happy and never want anything else if he were guaranteed warmth for the rest of his life. He defines life itself in terms of warmth. Everything else is considered unimportant.³¹

Physiological needs have certain characteristics in common: (1) they are relatively independent of each other; (2) they can usually be identified with a specific location in the body (for example, thirst can be identified with the throat); (3) in an affluent society such as ours, these needs are unusual rather than typical motivators; (4) in order to remain satisfied, they must be met repeatedly within relatively short periods of time (a person's drive for oxygen must be met at least twelve times a minute); finally, they require some conscious provision for their future satisfaction.³²

Safety Needs. When physiological needs are relatively well satisfied, needs at the next higher level emerge to dominate man's behavior. These are the safety needs, expressed as desires for protection against danger, threat, and deprivation. What has been said of the physiological needs also holds true for

³¹ Abraham H. Maslow, "A Theory of Human Motivation: The Basic Needs," in David R. Hampton, Charles E. Summer, and Ross A. Webber (eds.), Organizational Behavior and the Practice of Management (Glenview, Ill.: Scott, Foresman and Company, 1968), p. 28.

³² Hicks, op. cit., p. 284.

these needs. Since every industrial employee is at least partially dependent upon his employer, safety needs, expressed as desire for security, can also be very important. Desire for security takes the form of quests for economic security (savings account and a job with tenure and protection); preference for the familiar rather than the unfamiliar; desire for an orderly predictable world; and knowledge of the limits of acceptable behavior.

Social Needs. When physiological and safety needs are relatively satisfied, social needs become the new motivation of man's behavior. Again, the whole cycle already described will repeat itself with social needs as the new center. These needs include belonging, association, acceptance by his peers, and giving and receiving friendship and love. In this case, love is not synonymous with sex, which is a purely physiological need.

Man will aspire for a place in his group, and will strive to achieve it. Attaining such a place will become the most important thing in the world to him. In spite of knowing of these needs, managers often wrongly assume that these needs and the resulting informal organizations represent a threat to the objectives of the formal organization. By fearing hostility and opposition from informal organizations, some managers attempt to direct and control employee relationships in ways that frustrate the natural groupings of their employees. These employees may then react by being resistant, antagonistic, and uncooperative. This behavior is often a consequence, and not a cause of the manager's actions.

Esteem Needs. Esteem or ego needs--next above the lower-level needs of physiological, safety, and social--do not become motivators until the lower-level needs have been reasonably satisfied. Unlike the lower-level needs, these are rarely completely satisfied. But once these needs become important to an individual, he will continually seek satisfaction of them. The problem is that the typical industrial organization offers only limited opportunities for the satisfaction of these needs at the lower levels of employment.

Esteem needs consist of both self-esteem and the esteem of others. Self-esteem needs include self-confidence, self-respect, competence, achievement, and independence and freedom. Satisfaction of these needs leads to a feeling of worth, capability, strength, and of being useful and necessary in the world. Frustrating them leads to feelings of inferiority, weakness, and helplessness. Needs relating to the esteem of others include needs for status, recognition, appreciation, importance, and prestige.

Self-Actualization Needs. The emergence of self-actualization needs comes only after all other needs have been satisfied. These needs include the realization of one's potentialities, self-fulfillment, continued self-development, and being creative in the broadest sense of that term. Even if all other needs are satisfied, a person may experience discontent and

restlessness if he is not doing what he is best suited for. What a man has the potential to be, he must be.

The form that these needs take varies from person to person just as their human personalities do. Self-actualization needs can be satisfied through one of any combination of athletics, politics, academics, the family, religion, hobbies, or business. They involve a creative state in the sense that creativeness is realizing one's own potentialities to the fullest degree, whatever they may be. It is a feeling of accomplishment and attainment, and of being satisfied with one's self.

Transition Period

Brayfield and Crockett point out that a common assumption stated throughout most of the writings of the neo-classical era was that employee satisfaction directly affects productivity.³² Managers believed that this cause-and-effect relationship existed and consequently instituted nonmaterial incentives, job enlargement, and participative decision making in an attempt to increase employee satisfaction. This, they believed, would lead to increased productivity. Some of their attempts at motivation were successful; others were not.

Many such attempts were unsuccessful because managers were unaware that the research findings showed very little relationship

³² Arthur H. Brayfield and Walther H. Crockett, "Employee Attitudes and Employee Performance," Psychological Bulletin, 52, No. 5 (September, 1955), pp. 396-424.

between satisfaction and productivity. After an extensive review of the literature, Brayfield and Crockett concluded that "there is little evidence in the available literature that employee attitudes of the type usually measured in morale surveys bear any simple--or, for that matter, appreciable--relationship to performance on the job."³³ Needless to say, this finding shook the faith of those who were applying the human relations philosophy within their organizations. Wren quotes Daniel Bell as saying "that to think that contented workers were productive workers was to equate human behavior with 'cow sociology,' i.e., that contented cows give more milk."³⁴ Two later reviews of basically the same literature were not as discouraging and have concluded that a weak but positive relationship exists between satisfaction and productivity.³⁵ A possible reason for this relationship will be investigated later in this chapter.

All three of the reviews cited did find a definite trend for employee attitudes to be related to absenteeism and turnover. In this case, a negative relationship exists since the more an employee is satisfied with his job, the lower the absence rate and turnover rate.

³³Ibid., p. 408.

³⁴Wren, op. cit., p. 372.

³⁵See Frederick Herzberg, Bernard Mausner, R. O. Peterson, and Dora F. Capwell, Job Attitudes: Review of Research and Opinion, (Pittsburgh: Psychological Service, 1957) and Victor H. Vroom, Work and Motivation (New York: John Wiley and Sons, Inc., 1964).

Motivation In The Modern Management Era

There were abuses in the human relations approach to motivation just as there had been under scientific management. As had happened before, some practicing managers and consultants forgot the philosophy behind the approach and merely attempted to manipulate the worker to increase production. Although these abuses helped lead to its decline, some later findings explained why this approach was destined to fail. Research in the behavioral sciences later attributed the ineffectiveness of the neo-classical approach to: (1) the assumption that the satisfied worker was the most productive worker; (2) the assumption that the relationship between the employee and his manager, and the attitudes of the work group led to higher productivity, ignoring the nature of the work itself; and (3) the failure to realize just how complex man actually is.³⁶

Employee motivation in the modern management theory era seeks to build on the successful concepts of both the classical and neo-classical eras while searching for additional new truths. With the aid of the behavioral science disciplines, managers seek to learn more about their complex employees, not in order to manipulate them to greater productivity, but to achieve an organizational atmosphere in which employees can express and satisfy their needs while fulfilling the goals of the formal organization.

³⁶Wren, op. cit., pp. 441-442.

Expectancy Theory

Maslow's theory emphasizes the needs or drives of man that motivate him to act. Expectancy theory attempts to explain how this motivation is expressed. Expectancy theory is the second of today's two dominant theories of motivation. It also has its philosophical roots in hedonism. As with drive theory, expectancy theory hypothesizes that people expect or anticipate that a particular act of behavior will be followed by a particular outcome. Expectancy theory differs from drive theory in its assumption that people have preferences for various outcomes or results of behavior. In addition, expectancy theory considers people's tendencies to develop subjective, rather than objective probabilities concerning the future. When a person believes an event has no chance of occurring, he subjectively assigns it the value of "0". But if he is completely sure that a particular outcome will result from a particular act, he will subjectively assign it the value of "1". Expectancy theory also differs from drive theory in that it emphasizes psychological motives while drive theory stresses primarily physiological motives. These psychological motives of expectancy theory include esteem and self-actualization needs in an effort to explain performance. Conversely, drive theory centers on learning instead of performance, and does not need to rely on psychological motives to explain learning.³⁷

³⁷Porter and Lawler, op. cit., p. 11.

Path-Goal Theory of Motivation

From the original beginnings of expectancy theory as formulated by Tolman and Lewin in the 1930's,³⁸ several similar theories of motivation have developed. One which is relevant to motivation theory as it applies in business organizations is the "path-goal hypothesis" advanced by Georgopoulos, Mahoney, and Jones in 1957.³⁹ Based on the results of their research, they reported that an individual will produce at a given level if he perceives his productive behavior as having a high probability of leading to rewards which he values. This means that if a worker believes that one or more of his personal goals will be achieved if he is a high producer, he will tend to be a high producer. Conversely, if he does not believe that his personal goals will be achieved if he is a high producer, he has no motivation to be a high producer. A variation of the path-goal theory of motivation can be used to explain the relationship of satisfaction to absenteeism and turnover. The theory would predict that low turnover and absenteeism will result if a worker is highly satisfied with his job. This occurs because the satisfied worker

³⁸ Mitchell, op. cit., p. 211.

³⁹ Basil S. Georgopoulos, G. M. Mahoney, and N. W. Jones, "A Path-Goal Approach to Productivity," Journal of Applied Psychology, 41 (1957), pp. 345-353.

is motivated to go to work where his important needs are satisfied.⁴⁰

The Vroom Model

Victor Vroom has developed a motivational model which builds on previous expectancy theories (see Figure 1-2). In expanding the path-goal theory, Vroom presents two models.⁴¹ The first is used to predict job satisfaction. The second model can be used to predict an individual's choice of occupation, whether he will remain on the job or leave, and the effort he will put forth. It is referred to as the job performance model. Vroom states that workers are happy with their jobs as long as their needs are satisfied as a result of having their jobs. He further states that workers perform their jobs effectively as long as their effective performance leads to their getting what they want. From this it follows that job satisfaction and job performance are caused by different things. Job satisfaction depends on the amount of rewards received from the job. Job performance depends on whether or not the worker believes high productivity will result in increased salary or whatever else he desires from the job. The first-level outcome or organizational goal of high productivity may

⁴⁰Edward E. Lawler, III, and Lyman W. Porter, "The Effect of Performance on Job Satisfaction," Industrial Relations, 7 (October, 1967), p. 22.

⁴¹Vroom, op. cit.

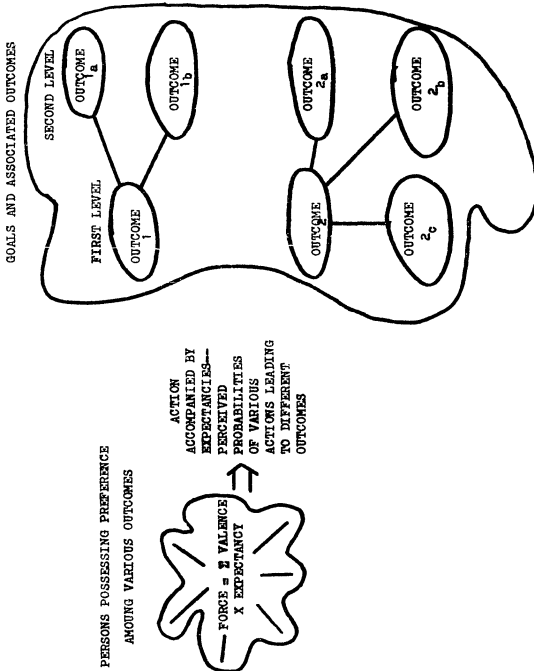


Figure 1-2: VROOM'S MOTIVATIONAL MODEL

From M.D. Dunnette, "The Motives of Industrial Managers," Organizational Behavior and Human Performance, 28 (1967), p. 178 reprinted in J.G. Hunt and J.W. Hill, The New Look in Motivation Theory for Organizational Research, "Human Organization", 28: (Summer, 1969), p. 101.

have a positive valence because of its expected relationship to the preferred second-level outcome or worker goal of increased salary. Valence refers to the strength of an individual's desire for a particular outcome and can take a wide range of both positive and negative values. The expected relationship between the first- and second-level outcomes is called instrumentality and refers to an individual's perception of the relationship between the first-level outcome of high productivity and the second-level outcome of increased salary. Instrumentality can range from +1 to -1. Expectancy, another variable in the model, refers to the possibility that a particular action or effort will lead to a particular first-level outcome. Expectancy is a subjective probability which can range from 0 to 1. An employee may really want to receive a promotion and transfer to the Florida branch of his firm (high positive valence); but if he believes that there is nothing that he can do to obtain it for himself (negative instrumentality), he will not be motivated to act. Another situation may occur in which an employee believes that productivity will lead to the promotion and transfer (positive instrumentality), but he is not interested in getting promoted and moving his family to Florida (negative valence). Neither in this case will he be motivated to act. For an employee to be motivated to act, he must place a high value on bringing about a certain outcome (positive valence) and believe that the outcome depends on his actions (positive instrumentality).

Vroom's model is a very general theory on motivation. It recognizes that individuals have different preferences and expectations, but it neglects to explore the differences or to categorize individuals in any way that could be used for predicting their preferences or expectations.

Porter and Lawler's Model

It was pointed out earlier in this chapter that a review of the research on the relationship between satisfaction and productivity found a weak but positive correlation. Vroom's theory also implies a relationship despite his statement that job satisfaction and job performance are caused by different things. Proceeding on the assumption that a relationship does exist, Porter and Lawler developed their model to explore the question of managerial motivation.⁴² The Porter and Lawler model of motivation is based on the assumption that rewards cause satisfaction and that sometimes performance produces rewards. Therefore, they hypothesize that the relationship between satisfaction and performance results from the action of a third variable--rewards. For this relationship to exist, Porter and Lawler feel that it is necessary for employees to believe that high levels of performance will result in high levels of rewards.⁴³ When this does occur, they see good performance leading to rewards which lead to satisfaction. This

⁴²Porter and Lawler, op. cit.

⁴³Ibid., p. 180.

phrasing says that satisfaction is caused by performance, instead of causing it as was assumed during the neo-classical era.

Figure 1-3 illustrates their theoretical model.

Variables Contained in the Model.⁴⁴ Porter and Lawler's model attempts to relate the nine key variables which they found to affect the relationship of managerial attitudes to managerial performance. These variables and their relationship to the other variables are discussed below.

Value of Rewards. This variable refers to how desirable possible rewards are to individuals. This desirability of rewards can take two forms. A particular individual may in his own mind determine the order in which he hopes to receive the rewards offered by his job. He may prefer the friendship of his fellow workers above all, with a salary increase and a promotion following second and third. Another individual may reverse this order preferring a promotion first, the raise second, and the desire for friendship last. This indicates that the various rewards available are desired differently by a particular individual. Likewise, one particular reward may be desired differently by various individuals. A promotion offered to a sales girl who performed well during the peak sales season may be refused. She may have worked hard to

⁴⁴This section interprets the Porter and Lawler model as stated in Porter and Lawler, op. cit., pp. 16-40 and 163-166.

obtain extra money to pay for Christmas presents and does not desire the responsibility and extra duties which go along with the promotion. Another individual may have taken a sales position on the chance that he would later be offered a promotion with its additional responsibilities and duties. He would be glad to accept the promotion.⁴⁵

Effort-Reward Probability. This next variable refers to an individual's belief that by exerting a certain amount of effort, he will obtain a certain amount of reward. Porter and Lawler divide this statement into two components: "(1) the probability that reward depends upon performance; (2) the probability that performance depends upon effort."⁴⁶ Porter and Lawler hypothesize that if either of these two probabilities is low, the probability that reward depends on effort will also be low.

Suppose that Geneva, a management major, highly desires to receive an "A" in her management class. She may feel that her chances of obtaining an "A" have little to do with her performance in the course, either because other students say that the instructor does not "give" "A's", or because grades depend on factors other than performance (favorites of the instructor, he does not like girls in management, etc.). Since she feels that her chances of receiving an "A" do not depend upon her performance, it also follows

⁴⁵Porter and Lawler, op. cit., pp. 16-18.

⁴⁶Ibid., p. 19.

that they do not depend upon the amount of effort she puts forth. Hence, she would perceive a low effort-reward probability. Even if she feels that receiving an "A" does depend on performance, she may feel that she is unable to achieve the level of performance necessary to receive that grade, even with a high level of effort. Another possibility is that Geneva may feel that effort will lead to rewards without necessarily resulting in performance. She may decide to write long and involved term papers and answers to test questions, even though they do not apply to topics or questions asked. Here she sees the instructor as awarding grades for "trying hard" but not necessarily for actual performance.

Porter and Lawler caution that the probability connected with the effort-reward variable is defined in terms of probability as perceived by a particular individual. Thus, the actual probability of Geneva receiving an "A" as a result of her efforts may be high, but the perceived probability is low because she sees no relationship between effort and rewards.⁴⁷

Effort. Effort refers to the amount of energy expended to accomplish a particular task. It does not necessarily relate to how successfully the task is carried out. Porter and Lawler state that the amount of effort expended depends upon the value an individual places on a reward and his perception of the probability

⁴⁷Ibid., pp. 19-21.

that effort will lead to that reward. In other words, effort is determined by "motivation" or combination of the value of rewards and the effort-reward probabilities. Porter and Lawler feel that motivation should be more strongly related to measures of effort than to measures of performance.⁴⁸

Abilities and Traits. These variables refer to the relatively permanent characteristics of an individual that indicate his present capability to complete a task successfully. These characteristics include his personality traits, intelligence, manual skills, ability to abstract, etc. Abilities and traits place a temporary ceiling or upper limit on a person's capability to perform. Through training or development programs, improved abilities may result. If this is true, a new, higher ceiling is placed on his ability to perform.⁴⁹

Role perceptions. Role perceptions refer to what an individual believes he should do to perform his job successfully. Porter and Lawler maintain that if his role perceptions are compatible with what his superiors feel he should be doing, then his effort will be expended as the organization desires. Conversely, if his role perceptions are "incorrect" as defined by the organization, then his efforts may not be contributing to successful performance as it is interpreted by the organization.⁵⁰

⁴⁸Ibid., pp. 21-22.

⁴⁹Ibid., pp. 22-24.

⁵⁰Ibid., pp. 24-25.

Performance. Performance refers to a person's accomplishment on the job. Porter and Lawler view performance as the net effect of a person's effort. Effort, as such, is seen as being modified by that person's abilities and traits, and by his role perceptions. Performance is measured in the present study by subjective self-ratings which the individual makes himself. Porter and Lawler utilized both self-ratings and ratings by superiors to measure performance.⁵¹

Rewards. Rewards refer to desirable results or outcomes that a person receives from his own thinking or from the action of others. Porter and Lawler distinguish between two types of rewards--intrinsic and extrinsic. Intrinsic rewards are given to an individual by himself for good performance. They include feelings of accomplishment, and satisfaction of higher level needs as defined by Maslow⁵² (esteem and self-actualization). Porter and Lawler believe that intrinsic rewards are directly related to good performance only if the job structure is varied and challenging so an individual can reward himself if he feels he has performed well. Extrinsic rewards are given by the organization and satisfy mainly Maslow's lower level needs (physiological, security, and social). They include such things as pay, promotions, status, and job security. Porter and Lawler feel that extrinsic rewards are weakly connected to performance and that at times, extrinsic

⁵¹ Ibid., pp. 25-28.

⁵² Maslow, "A Theory of Human Motivation," op. cit.

rewards are not perceived as being related to performance at all. It should be pointed out that if the reward is to be considered gratifying and fulfilling, the employee must positively value it. Otherwise, it would not be considered a reward.

In Porter and Lawler's model (shown on page 29), the feedback loop from rewards to effort-reward probability implies that rewards which follow performance will affect future perceptions of the relationship of rewards to performance. Porter and Lawler state that these perceptions will then affect an individual's expectancy that effort leads to rewards.⁵³ The presence of a feedback loop in the Porter and Lawler model indicates that the model utilizes drive X habit theory (past learning), as well as expectancy theory to explain its relationships.

Perceived Equitable Rewards. This variable refers to the amount of rewards an individual feels he should receive as a result of his performance. This variable can also be expanded to include the amount of rewards an individual feels should be attached to a particular position within the organization.⁵⁴ In their research, Porter and Lawler found performance to be linked to perceived equitable rewards. They explain that this relationship exists because self-ratings of performance are a major

⁵³Ibid., pp. 28-29.

⁵⁴Ibid., pp. 29-30.

influence in determining what amount of rewards an individual feels he should be receiving.

Satisfaction. Porter and Lawler view satisfaction as a deficiency measure. Satisfaction is determined by the difference between actual rewards and perceived equitable rewards. If actual rewards are equal to perceived rewards, then satisfaction results. The degree to which a person is either satisfied or dissatisfied depends on the size of the difference between the actual and perceived equitable rewards. Porter and Lawler hypothesize that the feedback loop from satisfaction to value of reward (see page 29) implies that the satisfaction felt after receiving rewards will affect the value of rewards in the future.⁵⁵ The inclusion of a feedback loop indicated that both past learning and expectancy theory are used to explain the relationships between the variables in the model.

Relationships. Porter and Lawler feel that a weaker relationship exists between effort and satisfaction than between performance and satisfaction. This is because effort is modified by abilities and traits and role perceptions before it affects performance. Porter and Lawler also believe that through rewards, performance has a more direct effect on satisfaction than satisfaction has on performance. As such, they see satisfaction as a dependent variable and not as a causal variable. Porter and Lawler do not

⁵⁵Ibid., pp. 30-31.

claim that their model totally explains the relationships between job attitudes and performance. They only sought to identify some of the important variables and the relationships thought to exist between them.

Tests of the Porter and Lawler Model

Several studies have been conducted since 1968, which test the validity of certain portions of the Porter and Lawler model. These studies have examined the model as it applies to supervisors and managers, nonmanagement personnel, and professionals.

Slocum⁵⁶ investigated the relationship of need satisfaction to performance for top-, middle-, and lower-level managers. He found that his research supported the general prediction of the Porter and Lawler model that an individual's degree of higher order need satisfaction is related to his performance. The satisfaction of autonomy and self-actualization needs were more closely related to performance than the satisfaction of the security need. However, in some cases, the satisfaction of the esteem need had a weaker relationship with performance than did the satisfaction of security needs. Based on the findings of his

⁵⁶ John W. Slocum, Jr., "Performance and Satisfaction: An Analysis," Industrial Relations, 9, No. 4 (October, 1970), pp. 431-436; and _____, "Motivation in Managerial Levels: Relationship of Need Satisfaction to Job Performance," Journal of Applied Psychology, 55, No. 4 (August, 1971), pp. 312-316.

data, Slocum states that the prediction of the Porter and Lawler model that satisfaction of higher level needs is more closely related to performance (than is the satisfaction of lower level needs) is only partially supported.

Kuhn, Slocum, and Chase⁵⁷ conducted a study to examine Maslow's theory of motivation as it applies to the performance of nonmanagerial employees. The study sought to determine the relationship of performance to the satisfaction of both lower and higher level needs as predicted by Porter and Lawler's model. They found that the satisfaction of lower level needs (extrinsic rewards) was more closely related to performance than the satisfaction of higher level needs (intrinsic rewards). They explain their findings as suggesting that the incentive pay system under which the employees operated served to reinforce the relationship between extrinsic rewards and performance.

In their study which tested the role of pay on the Porter and Lawler model, Schuster, Clark, and Rogers⁵⁸ found evidence which both affirmed and disaffirmed some of Porter and Lawler's hypotheses. The data supported the hypothesis that the higher

⁵⁷David G. Kuhn, John W. Slocum, Jr., and Richard B. Chase, "Does Job Performance Affect Employee Satisfaction?", Personnel Journal, 50, No. 6 (June, 1971), pp. 455-459 and 485.

⁵⁸Jay R. Schuster, Barbara Clark, and Miles Rogers, "Testing Portions of the Porter and Lawler Model Regarding the Motivational Role of Pay," Journal of Applied Psychology, 55, No. 3 (June, 1971), pp. 187-195.

the perceived probability that pay depends upon job performance factors, the more effort an individual will devote to performing his job effectively (Hypothesis 4-A). Seventy percent of the high rated performers felt that the amount of effort expended determines performance. The Porter and Lawler hypothesis (Hypothesis 4-E) that the more an individual sees his pay as a satisfier, the more effort he will put forth to perform his job effectively was claimed to be supported. However, the relationship was found to exist for only one of the three questions in Appendix III and that was at a 91 per cent level of confidence. The hypothesis which states that the perceived probability that pay depends upon effort, will be more highly related to measured actual job performance and effort than will be the perceived probability that pay depends upon quality of job performance (Hypothesis 4-D) was not supported. The sample surveyed tended to see pay related to quality of work as their performance level became higher. The last Porter and Lawler hypothesis tested by Schuster, Clark, and Rogers was also not supported. The hypothesis sought to confirm that the relationship between the perceived probability that pay depends upon job performance factors and measures of actual performance and effort will be stronger for those individuals who say their pay is important to them than it will be for those who say their pay is relatively unimportant to them (Hypothesis 4-C).

Greene⁵⁹ conducted a study to investigate the relationships of merit pay to both job satisfaction and performance, and the relationship between job satisfaction and performance for a sample of managers. The data support the hypothesis that merit pay causes satisfaction and that performance causes satisfaction. Greene states that the findings are consistent with the predictions of the Porter and Lawler model that differential performance causes rewards which then cause satisfaction.

Lawler's Model

Lawler⁶⁰ has formulated a motivation model to help explain what influences the goals and intentions of people. This model is based on the motivation model developed by Porter and Lawler which was presented earlier in this chapter (page 29). Lawler's motivation model which appears in Figure 1-4, considers both intrinsic and extrinsic motivation. The first variable in the model, $E \rightarrow P$, refers to the subjective probability that effort will lead to successful performance. This probability can vary from 0 to 1. Lawler believes that if a person feels he cannot

⁵⁹Charles N. Greene, "Causal Connections Among Managers' Merit Pay, Job Satisfaction, and Performance," Journal of Applied Psychology, 58, No. 1 (August, 1973), pp. 95-100.

⁶⁰Edward E. Lawler, III, "Job Attitudes and Employee Motivation: Theory, Research, and Practice," Personnel Psychology, 23, No. 2 (Summer, 1970), pp. 223-237. This section interprets the Lawler model of motivation as it is presented in the above article.

perform at a certain level, he is less likely to try to perform at that level. Therefore, when the probability of $E \rightarrow P = 0$, no motivation is present. Lawler states that $E \rightarrow P$ probability is directly affected by the person's self-esteem and experience in similar situations.

Motivation is also influenced by the perceived outcomes of successful performance and by the valence of these outcomes. A person's subjective probability that performance will lead to a particular outcome ($P \rightarrow O$) can vary from 1 to 0, and is multiplied by the valence of that outcome (V). The valence can vary from very desirable (+1) to very undesirable (-1). The products of the $P \rightarrow O$ probabilities multiplied by their respective valences are added for all outcomes that are related to performance.

For intrinsic rewards, the $E \rightarrow P$ probability has an influence on the $P \rightarrow O$ probabilities. The model shows this influential relationship because Lawler feels achievement motivation is activated only when certain $E \rightarrow P$ probabilities exist. The $P \rightarrow O$ probabilities for both intrinsic and extrinsic rewards are also affected by an internal versus external control variable. This variable determines if a person feels that performance will likely lead to outcomes (internal control) or if he is to have low $P \rightarrow O$ probabilities (external control).

A feedback loop which originates at the connection between performance and rewards leads to the $P \rightarrow O$ probabilities. Lawler included this variable to illustrate the importance of learning in

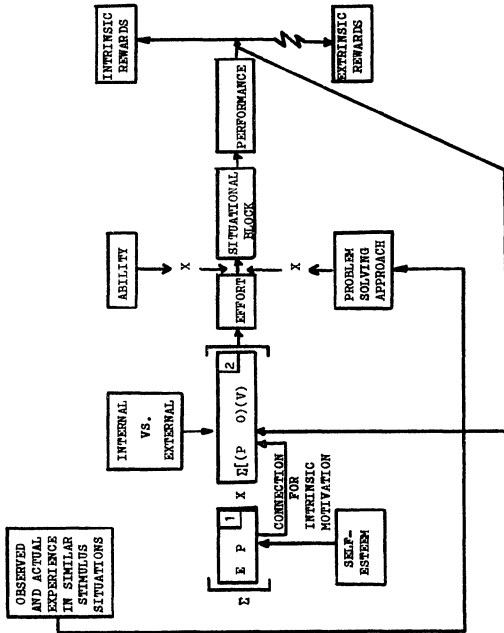


Figure 1-4: LAWLER'S THEORETICAL MODEL OF MOTIVATION

From Edward E. Lawler, III, "Job Attitudes and Employee Motivation: Theory, Research, and Practice," Personnel Psychology, Vol. 23, No. 2 (Summer, 1970), pp. 229 and 233.

determining what a person's $P \rightarrow O$ probabilities will be in a given situation. The relationship of past performance to expected outcomes will have an influence on a person's future $P \rightarrow O$ probabilities.

The $E \rightarrow P$ probability and the sum of the products of the $P \rightarrow O$ probabilities and their respective valences are multiplied to determine the degree of motivation to perform. If either factor is zero or if the second is negative, there will be no motivation to perform. However, the greater the product of these two factors, the greater the motivation to perform.

A person's motivation to perform determines the degree of effort he expends on the job. However, effort alone does not determine performance. Effort combines multiplicatively with abilities and with role perceptions (problem solving approach) in determining performance. If ability is zero, performance will be zero. Likewise, if a person's role perception of how effort can best lead to performance (based on past experience in similar situations) is inaccurate, performance will also be zero. Lawler's model also provides for a "situational block" which could prevent high performance even if ability and effort are high and role perceptions are correct.

Lawler's model provides for both intrinsic and extrinsic rewards. This provision is made because he believes extrinsic rewards do not always follow directly from performance since they are given by someone else besides the performer. Intrinsic rewards

are given to the individual by himself and are therefore more directly related to performance. Lawler admits that his model goes beyond the present research finding, but he believes that $E \rightarrow P$ relationships and $P \rightarrow ()$ relationships are suggested to be related to performance.

NEED FOR STUDY

The previous section presented a brief chronological view of motivation theory up to the present time. This section will justify the present study and indicate how the findings could be utilized to improve employee motivation on the job.

According to Maslow, as lower level needs are relatively satisfied, they become less directly motivating for behavior. One is motivated mainly by the next level of unsatisfied need. Thus gratified needs, in a sense, disappear. They are no longer motivating. Since any manager attempts to influence his subordinates' behavior, he must consider what needs are relatively unsatisfied, and therefore can be used as instruments for motivation. The data from this study could be used as instruments for motivation. The data from this study could be used by civil service managers to determine the needs of their employees (who occupy positions similar to those surveyed) which are unsatisfied, and therefore can be used as motivators. Through the use of a similar study at a later time, managers could determine if those needs which are presently unsatisfied in the occupations surveyed, have remained

unsatisfied for their own employees who occupy the same type of positions. These data could also be used to determine if a hierarchy or priority system of needs exists for those employees, and to determine the importance they place on their needs.

Knowledge of their employees' attitudes would be beneficial to both civil service officials and private industry managers in determining optimum motivational techniques. Such knowledge would also provide a better understanding of the desires of those employees who occupy the same type of positions as those surveyed and offer an insight into the satisfaction and dissatisfaction of their jobs. Strauss⁶¹ and Dubin⁶² have argued for flexible leadership styles and for giving opportunities for self-actualization to employees who possess the appropriate abilities and aspirations. But in those situations where tasks are highly structured and the costs of self-actualization for the individual outweigh the gains to the organization, one would assume that attempts at satisfying self-actualization needs through a participative management style of leadership would not be appropriate as a motivational device.

The information gathered in this study may be beneficial to managers in developing their personnel policies. Filley and House have stated that:

⁶¹ George Strauss, "Some Notes on Power Equalization," in Harold Leavitt (ed.), The Social Science of Organizations (Englewood, Cliffs, N. J.: Prentice-Hall, 1963), pp. 41-84.

⁶² Robert Dubin, "Person and Organization," in Robert Dubin (ed.), Human Relations in Administration, 3rd ed. (Englewood Cliffs, N. J.: Prentice-Hall, 1968), pp. 90-93.

for purposes of formulating corporate personnel policy, one might look to the needs hierarchy to determine the appropriate motivators for various classes of employees, and, on this basis, design compensation, performance appraisal, and promotion plans. The need theory . . . does provide useful descriptive categories⁶³ for analysis or diagnosis of employment situations.

It is inferred from the writings of McDermid that he would agree with this writer that the data gathered in this study could be beneficial to managers in designing compensation programs.

According to McDermid:

all elements in the [compensation] package--base pay, incentive plans, protective provisions, benefit programs, and . . . [bonuses]--could be evaluated in their relationship to each other. Then if it were found that a given level of employees was primarily motivated by physiological needs, great emphasis could be placed on base pay; by safety needs, on protective provisions; by esteem needs, on . . . [bonuses].

Thus, through an understanding of what needs were motivating men and how money could be used to satisfy them the compensation program could be so ordered as to achieve maximum motivation at lowest possible cost. The needs of the individual would best be met, and the attainment of corporate objectives best insured.⁶⁴

While there have been several studies dealing with Maslow's hierarchy of needs (Haire and Gottsdanker:⁶⁵ grocery employees;

⁶³ Allen C. Filley and Robert J. House, Managerial Process and Organizational Behavior, (Glenwood, Ill.: Scott, Foresman and Company, 1969), p. 386.

⁶⁴ Charles D. McDermid, "How Money Motivated Men," Business Horizons, 3, No. 4 (Winter, 1960), p. 100.

⁶⁵ M. Haire and J. Gottsdanker, "Factors Influencing Industrial Morale," Personnel, 27 (1951), pp. 445-454.

Porter:⁶⁶ managers; Beer:⁶⁷ clerical workers; Friedlander:⁶⁸ scientists and engineers; Porter and Lawler:⁶⁹ managers), this study is unique in that it considers the attitudes of classified, white-collar, Louisiana civil service employees.

Since this study investigates need satisfaction on the job, the results could be beneficial to managers in determining the effect of satisfaction on turnover, accidents, and absences. In 12 of 13 studies dealing with satisfaction and absenteeism, Herzberg⁷⁰ found job attitude to be inversely related to high absenteeism. Based on the findings of these and several other studies, Herzberg concluded that a worker with positive job attitudes will remain more consistently on the job, will be involved in fewer accidents, and will have a lower incident of psychosomatic illnesses. In addition, several extensive reviews of job satisfaction

⁶⁶ Lyman W. Porter, "A Study of Perceived Need Satisfaction in Bottom and Middle Management Jobs," Journal of Applied Psychology, 45 (1961), pp. 1-10; _____, "Job Attitudes in Management: I. Perceived Deficiencies in Need Fulfillment as a Function of Job Level," Journal of Applied Psychology, 46 (1962), pp. 375-384; and _____, "Job Attitudes in Management: II. Perceived Importance of Needs as a Function of Job Level," Journal of Applied Psychology, 47 (1963), pp. 141-148.

⁶⁷ Michael Beer, "Needs and Need Satisfaction Among Clerical Workers in Complex and Routine Jobs," Personnel Psychology, 21, No. 2 (Summer, 1968), pp. 209-222.

⁶⁸ Frank Friedlander, "Comparative Work Value Systems," Personnel Psychology, 18, No. 1 (Spring, 1965), pp. 1-19.

⁶⁹ Porter and Lawler, op. cit.

⁷⁰ Herzberg et al., Job Attitudes, op. cit.

literature by Clark,⁷¹ Vroom,⁷² and Fournet, DiStefano, and Pryer⁷³ have consistently revealed that employee need satisfaction is accompanied by less employee turnover and absenteeism. This study provides managers with information concerning the present degree of need satisfaction of civil service employees in white-collar jobs and those factors which these employees perceive as desirable and existing in employment outside of the civil service system. Starting from these data, civil service officials could then work to improve the satisfaction of their employees' needs within their respective organizations (if they are not already satisfied on the job) and thereby reduce turnover, accidents, and absenteeism.

Although the data collected in this study is interpreted on a group, and not on an individual basis, the information received on the employees' role perceptions could be beneficial to managers in viewing whether their employees feel inner-directed or other-directed behavior is most necessary for success in the types of positions surveyed. Inner-directed behavior includes such traits as forceful, imaginative, independent, self-confident, and decisive. Other-directed behavior includes such traits as cooperative, adaptable, cautious, agreeable, and tactful.

⁷¹ James V. Clark, "Motivation in Work Groups: A Tentative View," Human Organization, 19, No. 4 (1960-1961), pp. 199-208.

⁷² Vroom, op. cit.

⁷³ F. P. Fournet, M. K. DiStefano, Jr., and W. Pryer, "Job Satisfaction: Issues and Problems," Personnel Psychology, 19, No. 2 (1966), pp. 165-183.

ORGANIZATION OF THE STUDY

This first chapter served to introduce the present study by explaining the purpose of the study, covering a brief historical view of motivation theory, and indicating reasons why the study is needed. In particular, this chapter served to explain Maslow's hierarchy of needs theory and Porter and Lawler's motivational model--both of which will be examined in this study.

The following chapters will detail the methodology used in this study as well as the hypotheses, tests of hypotheses, and discussions of the findings. Chapter II--Methodology--explains the methodology used in this study. This includes the attitude measures used in gathering the data, the measures of job behavior, a description of the research site and of the sample, and the data analysis methods used in determining whether or not relationships exist between the measures of attitude and self-ratings of performance.

Chapter III--Hierarchy of Needs--investigates the validity of Maslow's hierarchy of needs theory as it applies to the civil service system. The fourth chapter, Satisfaction of Needs, considers the relationships between self-ratings of performance and need fulfillment and need satisfaction. These findings are then used to test Porter and Lawler's model.

Role Perceptions--Chapter V--considers the perception of whether certain traits lead to success in organizations. The relationships of role perceptions to self-ratings of performance and self-ratings of effort are investigated concerning their effect on Porter and Lawler's model. Chapter VI--Pay Satisfaction--begins with a discussion of the historical role of pay and incentive pay plans in business organizations. The relationships of pay as a satisfier to self-ratings of effort and self-ratings of performance are investigated as they apply to Porter and Lawler's model.

The concluding chapter--Chapter VII--applies the findings of this study to refute or verify Maslow's hierarchy of needs theory. In addition, the findings are used to test the general pattern of relationships suggested by Porter and Lawler's model. This chapter also describes the implications of these findings for management and defines areas for future research.

Chapter II

Methodology

EXPLANATION OF METHODOLOGY

Since one of the objectives of this study was to test certain hypotheses of the Porter and Lawler Model¹ on rank and file employees, it was necessary to partially duplicate their methodology. As such, the present investigation is a correlational study. This allows the relationship between two variables to be focused upon, but only at a fixed point in time. A correlational study cannot directly prove the existence of cause-and-effect relationships. However, Porter and Lawler believed that if a predicted, close relationship was found, it would offer some support for their model without establishing that a cause-and-effect relationship existed. If no relationship was found where their model predicted one should be, Porter and Lawler believed that a correlational study could disprove part of their model. The correlational approach also allows the investigator to view the relationship of several attitude variables to self-ratings of performance. This viewing of several attitude variables is a necessary requirement if the predictions of the Porter and Lawler model are to be tested. An experimental study in which the experimenter could produce changes

¹Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968).

in one variable in order to observe the effects on a second variable would have established the existence of any cause-and-effect relationships. However, the personnel department at Louisiana State University would not have allowed the survey of its employees unless it was by a questionnaire mailed to their homes. Such a restriction eliminated the possibility of establishing cause-and-effect relationships through the use of an experimental study and necessitated the use of a correlational study.

Following the methodology of Porter and Lawler, the present study also uses questionnaires as the basic data collection instrument. It is fortunate for this study that Porter and Lawler used questionnaires to gather their data since the Louisiana State University personnel office would approve only questionnaires mailed to their employees' homes as the means of data collection. Any instrument which took time away from the performance of duties, such as interviews, was not approved. Despite this restriction, the use of questionnaires made it possible to collect data from a larger, more heterogeneous sample than would have been possible with interviews. The use of a broad sample of employees decreased the possibility that the results would be prejudiced by the unique attitudes existing within any one department, thereby increasing the possibility that the results would be more appropriate for generalization to the organization surveyed. The use of interviews, even if they had been allowed, would have been time consuming, particularly if the entire population of 652 employees had been

interviewed. If only a portion of the entire population had been interviewed, the possibility of collecting data from a less heterogeneous sample would have been increased. This is not to imply that questionnaires are without limitations. The questions may have appeared ambiguous or emotionally loaded to some of the respondents. In addition, it may be possible that the only employees who returned their questionnaires had strong feelings toward either extreme. Some employees may have given responses which they felt were sought by the researcher even though they were erroneous. The use of questionnaires did not allow the researcher to probe into a respondent's answers to determine the respondent's true feelings, but forced the respondent to answer the question based on the available choices listed on the questionnaire. Porter and Lawler used questionnaires in order to obtain a large sample while sacrificing the potential advantages of flexible questions and respondent participation available with interviews.

Since this investigation is interested in studying the attitudes and performance of white-collar employees in a service organization, the same problem of measuring job performance which existed in Porter and Lawler's study of managers is present here also. The problem concerns the lack of productivity or quality control records which would allow "objective" evaluation of performance. Consequently, it was decided to rely on self-ratings as the measure of job performance.

The assumption is made that the employee is in a reasonable position to know about the job and to evaluate his performance. The complete reliance of this study upon self-ratings as measures of quality of job performance and amount of effort expended on the job is one of the limitations of this study. Evaluations of performance and effort may have been more accurate if ratings by superiors had also been obtained. However, the personnel office of Louisiana State University would not have supplied the researcher with the name of each employee's superior nor was the researcher allowed access to the files of that office. Such a restriction eliminated the possibility of utilizing superiors' ratings of the performance and effort of employees. The global ratings, such as quality of job performance, used by Porter and Lawler were also employed in the present study. It was felt that global ratings, rather than some composite of ratings on a number of specific traits, would be a reliable and valid measure of behavior.

ATTITUDE MEASURES

The attitude data for the present study were obtained by the administration of a six-section questionnaire. Certain sections of the questionnaire were adapted from four previously used questionnaires: "Need Satisfaction in Work,"² "The Need Satisfaction and

²Robert H. Schaffer, "Job Satisfaction as Related to Need Satisfaction in Work," Psychological Monographs, 67, No. 14, (1953), Whole Number 364, pp. 1-29. See "Need-Satisfaction in Work Scales: Part D," p. 26.

Role Perception Questionnaire," "The Pay Questionnaire," and the "Self-Rating Form."³ The six sections of the questionnaire sought to uncover the following information from the employees surveyed:

- I. Demographic Data: personal information on the employee to help with the statistical analysis of the data.
- II. Need Satisfaction: the employee's satisfaction with certain characteristics of his civil service position, broken down into categories corresponding to Maslow's hierarchy of needs,⁴ and the importance he places on those characteristics.
- III. Pay as a Satisfier: the employee's attitudes toward the perceived probability that pay depends upon performance.
- IV. Self-Rating Form: how the employee rates himself relative to others in the civil service system on the quality of his job performance, his productivity, and the amount of effort he expends on the job.
- V. Role Perception: how the employee ranks the twelve traits listed based on his belief of what is most necessary for success in his civil service position.

³Porter and Lawler, op. cit., Appendix II, pp. 190-193, and Appendix III, p. 194.

⁴Abraham H. Maslow, "A Theory of Human Motivation," Psychological Review, 50 (1943), pp. 370-396.

VI. Private Business Attraction: the importance of whether or not certain characteristics, based on each of the needs in Maslow's hierarchy, would be desired in his new position if the employee were to leave the civil service system.

Appendices I-VI contain a complete copy of the six-section questionnaire.

Each of the items in the "Need Satisfaction" section attempts to measure the existing degree of need fulfillment, the discrepancy between achieved and expected levels, and the relative importance of the item. Therefore, each scale item requires three separate responses on a Likert-type subscale. This scale is constructed of items such as:

The opportunity, in my civil service position, to give help to other people:

- a) How much is there now?
(min) 1 2 3 4 5 6 7 (max)
- b) How much should there be?
(min) 1 2 3 4 5 6 7 (max)
- c) How important is this to me?
(min) 1 2 3 4 5 6 7 (max)

There will be two types of data derived from these responses. The first will be a deficiency measure obtained by subtracting the response to (a) "How much of the characteristic is there now

connected with your position?" from the response to (b) "How much of the same characteristic should there be?" The deficiency score represents the difference between ratings on subscales (a) and (b). This score also represents the employee's "satisfaction" with this particular item. The response to (a) "How much of the characteristic is there now connected with your position?" represents the employee's degree of "fulfillment" with that item. The second type of data is simply a ranking of needs based on the responses to the "How important is this?" subscale.

Since the respondent is not directly asked about satisfaction, Porter has contended that the method of scaling used in this questionnaire reduces the probability that any simple "response set" determines the expression of satisfaction.⁵ An a priori assumption is made that the less the difference between "How much x is there?", and "How much x should there be?", the greater the satisfaction with the characteristic in question. Porter and Lawler see this as asking the respondents, "How satisfied are you in terms of what you expected from this particular civil service position?" It was decided to measure satisfaction in the present study by using the same measures employed by Porter and Lawler. This measuring device has had a large exposure (over 3000 questionnaires returned) without any mentioned problems. In addition,

⁵Lyman W. Porter, "Job Attitudes in Management: I. Perceived Deficiencies in Need Fulfillment as a Function of Job Level," Journal of Applied Psychology, 46, No. 6, (December, 1962), p. 378.

there does not appear to be a "best way" to measure satisfaction. A study by Wanous and Lawler on the measurement and meaning of job satisfaction concluded that "as far as the measurement of satisfaction is concerned, the data suggest that there is no one best way to measure it."⁶

Of the twelve human need categories used by Schaffer in his study,⁷ ten were adaptable into Maslow's hierarchy of needs. Hence, several of Schaffer's questions were modified for use in the present questionnaire. Although some of Schaffer's categories may fit into more than one need category, it was decided to place them into the below listed need categories for the purposes of this study. The questionnaire will investigate the following need categories:

- I. Physiological (2 and 8)⁸
- II. Security: Economic Security (11)
Dependence (4)
- III. Social: Affection and Interpersonal Relationships (15 and 18)
- IV. Self-Esteem: Recognition and Approbation (1)
Mastery and Achievement (3)
Independence (Self-Expression) (10)

⁶ John P. Wanous and Edward E. Lawler, III, "Measurement and Meaning of Job Satisfaction," Journal of Applied Psychology, 50, No. 2 (1972), p. 104.

⁷ Schaffer, op. cit., pp. 1-29.

⁸ Indicates the question numbers of the questions which were asked in this category in the questionnaire as it appears in Appendix II.

V. Esteem of Others: Recognition and Approbation (9 and 13)
Dominance (6)

VI. Self-Actualization: Social Welfare (7, 12, and 14)
Creativity and Challenge (16 and 17)

The questionnaires were distributed individually by United States mail to the homes of the employees to be surveyed. Each of the sets of questionnaires was accompanied by a letter from the director of personnel services. A copy of his letter is contained in Appendix VII. In this letter the director explained the purpose of the research and urged the employee to cooperate by completing the questionnaire and returning it for analysis. Also accompanying the questionnaire was a personal letter from the researcher. Appendix VIII contains a copy of this letter which also explains the purpose of the research and urges the employee's cooperation. In addition, each employee was assured that even though the questionnaire was numbered, his responses would be confidential. To be sure that their responses were held confidential, twelve respondents removed the number from their questionnaires before returning them for analysis. The letter from the researcher stated that the questionnaires were numbered in order that a follow-up letter could be sent to those individuals who failed to respond initially. This statement was placed on the letter in an attempt to obtain more returned questionnaires if the employees believed that they would be "bothered" with a follow-up letter later if they did not respond initially. In reality, there was no plan to send a

follow-up letter. Along with the questionnaire and the letters, each subject received a postage-paid, addressed envelope in which to return his completed questionnaire directly to the researcher's home.

JOB BEHAVIOR MEASURES

Three measures of job behavior were obtained for each employee. These measures were self-ratings obtained when the questionnaire asked each employee to rate himself in relation to others with similar civil service duties on three factors: quality of job performance, productivity on the job, and the amount of effort put forth on the job. It is possible that some employees would automatically rate their quality of performance, productivity, and amount of effort expended higher than they would rate others on these factors. Nevertheless, the employee is at times in a better position than his manager to more accurately evaluate his own performance, productivity, and effort as they compare to the performance, productivity, and effort of others with similar duties. However, Porter and Lawler found practically no relationship ($r = .03$) between the superior's ranking of job performance and self-ratings of job performance and only a small relationship ($r = .20$) between the superior's ranking of effort expended and self-ratings of effort expended and self-ratings of effort expended. Appendix IV contains a complete copy of instructions and items used to obtain these ratings.

This section of the questionnaire utilized the same identical rating scale as was used in Porter and Lawler's study. Porter and Lawler thought that self-ratings were important since they are one of the bases employees consider when deciding whether to remain with their present company, the equity of their income, and the amount of effort they should expend on the job. Although this study was unable to utilize ratings by superiors as a result of the restrictions placed on data gathering methods of this study by the Louisiana State University personnel office, ratings by superiors can be significant. Such ratings can be the basis by which promotions, terminations, and salary increases are made.

Table 2-1 presents the Pearson product-moment correlation coefficients among the three self-rated job performance measures for the entire sample. These correlation coefficients indicate that there are substantial relationships between the three self-ratings. Therefore, employees who rate themselves high on quality of job performance, also rate their productivity and the amount of effort they expend as high. However, the sizes of these correlation coefficients indicate that there is a large degree of unexplained variance in the relationships. But such a finding is in accord with Porter and Lawler's model. Their model indicates that effort expended is but one variable that influences the quality of job performance. Other variables such as ability and role perceptions also influence job performance. Therefore, their model does not predict a perfect relationship between effort expended and quality of job performance, and based on these data, one does not exist.

Table 2-1
RELATIONSHIPS AMONG MEASURES OF JOB PERFORMANCE

	Self-Rating of Productivity	Self-Rating of Effort Expended
(N = 258)		
Self-Rating of		
Job Performance	.66*	.58*
Self-Rating of		
Productivity		.50*

*p < .01

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard E. Irwin, Inc. and The Dorsey Press, 1968), p. 47.

DESCRIPTION OF RESEARCH SITE

The present study was carried out in Louisiana State University, located in Baton Rouge, Louisiana. The university employs both white- and blue-collar workers (classified), as well as faculty personnel (unclassified). In addition, some workers are employees of the university, while others are under the Louisiana state civil service system or the federal civil service system. The population used in this study consisted of the classified, white-collar, state civil service employees of Louisiana State University.

SAMPLE

The questionnaire was distributed to the entire population consisting of 652⁹ classified, white-collar, state civil service employees of Louisiana State University. The population consisted of account clerks, accountants, clerks, personnel technicians, stenographer clerks, typist clerks, and miscellaneous professional and office personnel. The term "professional" is used by the Louisiana State University personnel office to include personnel technicians, accountants, personnel officers, and managers. For the purposes of this study, the term "office personnel" will be used to identify all personnel not classified as "professional." Table 2-2 shows the breakdown and the response rates for each of these classifications. The response rate for the total sample was 39.6 per cent. As may be expected with the type of positions surveyed, 95 per cent of the respondents were females. The findings of this study may be limited as a result of the types of positions which the employees in the sample occupy. Many of these positions do not contain very challenging tasks or permit the autonomy or independent thought which is usually considered to contribute to gratification of higher level needs. Therefore, the routine and repetitive nature of work in ~~types of~~ positions surveyed may limit the findings of this study.

⁹Originally, 675 questionnaires were distributed, but 23 respondents returned their questionnaires stating that they were not Louisiana civil service employees.

Table 2-2
RESPONSE RATES

Classification	Number of Question- naires Distributed	Number of Question- naires Returned	Percentage of Question- naires Returned
Professional			
Accountants	36	17	47.2
Miscellaneous	<u>28</u>	<u>5</u>	<u>17.9</u>
Subtotal	64	22	34.4
Office			
Accounts Clerks	37	16	43.2
Clerks	49	19	38.8
Typist Clerks	210	76	36.2
Stenographer Clerks	221	103	46.6
Miscellaneous	<u>71</u>	<u>22</u>	<u>31.0</u>
Subtotal	588	236	40.1
Total Sample	652	258	39.6

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 50.

Table 2-3 presents the demographic characteristics of the respondents. Since the sample is not a random sample of civil service employees in general, conclusions must be restricted to the civil service system as it exists at Louisiana State University. In addition, conclusions are further restricted by the population containing only classified, white-collar personnel who are mainly female (95 per cent).

Table 2-3
CHARACTERISTICS OF THE RESPONDENTS

	Professional	Office
N.....	22	236
Mean Age (Years).....	40.0	33.6
Mean Seniority (Years).....	10.6	6.5
Mean Time in Position (Years).....	5.5	4.3
Number with Education Level of (Highest Attained):		
Some High School.....	0	1
High School Graduate.....	3	40
Some College.....	9	84
Business College.....	4	84
College Degree.....	4	22
Some Graduate Work.....	2	3
Masters Degree.....	0	2
Number with Family Status of:		
Male with Dependents.....	7	3
Male without Dependents.....	0	2
Female with Dependents.....	11	103
Female without Dependents.....	4	128
Number Entering Civil Service from:		
School.....	5	73
Another Job.....	11	87
Military.....	0	0
Housewife.....	3	62
Unemployment.....	3	14
Mean Number of Civil Service Examinations Taken Before First Position Accepted..		
	1.3	1.3
Number Accepting First Position Offered.....		
	16	148
Number Which are Supervisors.....	12	64
Mean Monthly Salary.....	\$782.82	\$523.94
Source: Primary		

DATA ANALYSIS METHODS USED

One purpose of this study is to test the relationships between need satisfaction and need importance as predicted by Maslow's hierarchy of needs theory. This is accomplished by using a correlation coefficient to estimate the degree of relationship between two variables. This allows the relationship between two variables to be focused upon, but only at a fixed point in time. A correlational study is limited in that it cannot directly prove the existence of cause-and-effect relationships.

An additional purpose of this study is to determine if consistent and statistically significant relationships exist between the self-reported measures of attitude (satisfaction, fulfillment, and importance) and self-ratings of performance as predicted by Porter and Lawler's model. It was therefore necessary to use data analysis methods which would measure the relationships existing between these attitudes and self-ratings of performance and to test these relationships for statistical significance. This also could be accomplished by using a correlation coefficient to estimate the degree of relationship between two variables or the sample could be divided into high and low groups. The correlation coefficient method has disadvantages in that it requires that both variables be scaled on equal interval scales and the method does not allow graphical presentation. Therefore, as with the Porter and Lawler study, the sample was divided into high and low

groups on the basis of one variable (such as self-ratings of performance) and then the scores of these high and low groups were compared on the basis of a second variable (such as fulfillment). When comparing high and low groups, the greater the difference between the two groups based on the second variable, the stronger the relationship is between the variables. An advantage of the high versus low group comparison method is that it does not require that the two variables be scaled on equal interval scales. In addition, the high versus low group comparison method allows graphic presentation of the relationships. It was decided that the mean score on one variable would serve as the dividing point in determining the composition of the high and low groups. Table 2-4 indicates how the respondents rated the quality of their performance and the amount of effort expended on the job. The mean of the self-ratings of performance is 6.2 with a variance of 0.68. The mean of the self-ratings of effort expended is also 6.2 but with a variance of 0.86. As a result of the small amount of variance from the means, perhaps a better basis for determining the composition of the high and low groups would have been to utilize only the top and bottom thirds of the self-rating scores. Such a division based on top and bottom thirds of the responses may have been a better method of identifying two clearly different groups.

Originally it was the intention of the researcher to divide the sample into two groups composed of "professional" and "office"

Table 2-4
SELF-RATINGS

Self-Rating	Number of Respondents Reporting Self-Ratings of					Mean	Variance
	3	4	5	6	7		
Performance	0	10 (3.9%)	39 (15.1%)	104 (40.3%)	105 (40.7%)	6.2	0.68
Effort	2 (.8%)	14 (5.4%)	33 (12.8%)	79 (30.6%)	130 (50.4%)	6.2	0.86

Source: Primary

personnel. Such a division would allow a separate data analysis to be conducted on each group. The results of these analyses could then be used to compare the two groups. Because the responses for the "professional" and "office" personnel were so similar with no significant differences, and the sample of "professional" employees was small (22 or 8.5 per cent), it was decided to combine the responses of both groups and to report the findings based on the entire sample of employees surveyed.

The statistical significance of the difference between the mean scores of the high and low groups was tested by means of F- or t-tests. The F-test or analysis of variance investigates

squared differences between the two means in comparison with the squared standard error. The t-test investigates absolute differences between the two means in comparison with the standard error. Both the F- and t-tests hypothesize that the two samples come from the same universe and that the difference between the two means is 0. This is called the null hypothesis. The null hypothesis is rejected if the probability of F or t is less than $\alpha = .05$. The larger the F- or t-value, the stronger the relationship existing between the two variables on which it is based. The 95 per cent level of confidence was accepted as the basis for rejecting the null hypothesis. Tests of significance are subject to Type I and Type II errors. With a significance level of .05, a Type I error could occur 5 times out of 100 if the researcher believes he has something when in fact he does not. Type II errors occur when the researcher says that his data do not really mean anything when in fact they do.

This chapter detailed the attitude and job behavior measures used to gather the data for this study. The data came from the sample which consisted of 258 white-collar, classified, civil service employees of Louisiana State University. The statistical techniques to be used in analyzing the data were also identified and explained. Chapter III--Hierarchy of Needs--will use correlational analysis to investigate the relationships between need satisfaction and need importance as hypothesized by Maslow.

Chapters IV-VI will examine Porter and Lawler's model by dividing the sample into low and high groups on the basis of one variable in order to make comparisons on the basis of other variables.

Chapter III

Hierarchy of Needs

One of the most popular theories of human motivation was formulated by Abraham H. Maslow in 1943.¹ Maslow's theory states that man's needs are arranged in a hierarchy of importance which consists of five need levels. These need levels, listed in order from lowest to highest, are as follows:

1. Physiological--needs necessary for survival which include air, food, water, sleep, elimination, mating, and temperature regulation.
2. Safety--desires for protection against danger, threat, and deprivation, as well as the desire for security.
3. Social--needs for belonging, association, acceptance by peers, and giving and receiving friendship.
4. Esteem--needs for self-confidence, self-respect, competence, achievement, independence and freedom, status, recognition, appreciation, importance, and prestige.
5. Self-Actualization--realization of one's potentialities, self-fulfillment, continued

¹A. H. Maslow, "A Theory of Human Motivation," Psychological Review, 50 (1943), pp. 370-396. For a more detailed presentation of Maslow's theory, see Chapter I.

self-development, and being creative in the broadest sense of that term.

This hierarchy of "prepotency" or urgency of satisfaction means that the most urgent need will monopolize the individual's attention while less prepotent needs are minimized, even forgotten. But as that need becomes satisfied, needs at the next higher level will become more important. Maslow ranks needs in a hierarchy of prepotency because some needs are more necessary for survival than others. The physiological need--ranked first in prepotency--must be satisfied in order to sustain life. Included on this level are air, food, water, sleep, elimination, mating, and temperature regulation. When physiological needs are relatively well satisfied, safety needs--ranked second in prepotency--emerge. These safety needs are expressed as desires for protection against danger, threat, and deprivation. Desire for security can also take the form of quests for economic security and preference for the familiar rather than the unfamiliar. The other need levels--social, esteem, and self-actualization--are each in ascending order ranked higher in the need hierarchy and are further removed as requirements for survival. In addition, Maslow's 1943 theory predicts that the importance of a satisfied need will decrease while the importance of the next higher level of unsatisfied need increases. Therefore, according to Maslow, as physiological needs become reasonably well satisfied, the importance of the safety needs will increase, and

the importance of the physiological needs will decrease. The theory contends that importance will decrease for every other need as that need becomes satisfied. A later writing by Maslow modifies this concept of prepotency for people who are predominantly growth motivated. For such people, gratification does not lead to decreased, but rather increased motivation.²

This chapter will utilize Maslow's theory to investigate whether a need hierarchy exists for the civil service employees in the study; the degree of importance that the sample places on each of the needs in Maslow's hierarchy; and the degree to which the needs in Maslow's hierarchy are fulfilled and satisfied on the job. In addition, the importance which the employees sampled place on the needs in Maslow's hierarchy while presently in the civil service system will be compared with the perceived importance which would be placed on Maslow's needs if the sample were in private industry.

HYPOTHESES

Argyris suggests that as a result of the dependence, submissiveness, and passivity caused by the organizational principles of task specialization, unity of command, chain of

² Abraham H. Maslow, Toward A Psychology of Being (Princeton, N. J.: D. Van Nostrand Company, Inc., 1962), p. 28.

command, and span of control, employees may react by becoming apathetic, disinterested, and noninvolved. This may lead to employees reducing the number and the importance of the needs that they wish to express while at work. They may retain and strengthen their informal adaptive behavior through informal group sanctions and formal trade unions. In addition, they may emphasize material rewards and teach their children not to expect satisfaction on the job.³

Such a suggestion supports this researcher's feeling that the conditions of modern industrial life give only limited opportunity for the relatively dormant human needs of esteem and self-actualization to find expression on the job. The lack of satisfaction most people experience with respect to lower level needs diverts their energies to work toward satisfying those needs, and the needs for self-fulfillment remain below the level of awareness on the job.

Indeed, many social scientists have favored the concept of self-actualizing work. This advocacy may result from the nature of their own work and values. By so advocating, they are prescribing to all workers values that may be appropriate only to the higher occupational and status levels. In actuality,

³Chris Argyris, "The Individual and Organization: Some Problems of Mutual Adjustment," in Studies in Organizational Behavior and Management, ed. by Donald E. Porter, Philip B. Applewhite, and Michael J. Mieshaug, 2nd ed. (Scranton, Pa.: International Textbook Company, 1971), pp. 580-581.

workers in other occupational and status levels might still be attempting to satisfy lower level needs. Friedlander feels that "implicit in these prescriptions are potent value judgments which, with their strong emphasis on individual dignity, creative freedom, and self-development, bear all the earmarks of an academic origin."⁴ From this reasoning follows:

Hypothesis I: Employees with satisfied lower level needs (physiological, safety, and social) who occupy civil service positions which do not offer the opportunity to fulfill higher level needs (esteem and self-actualization) on the job will not consider these higher level needs to be important on the job.

An important characteristic of Maslow's need hierarchy is its prediction of a decrease in the strength of a given need following its satisfaction. Thus, for example, when the safety needs are largely satisfied, not only should the importance of the social needs increase, but also the importance of the safety needs should decrease. Maslow's earlier theory⁵ contends that importance will decrease for every other need as that need becomes satisfied.⁶ From this it follows that the satisfaction of a given

⁴Frank Friedlander, "Comparative Work Value Systems," Personnel Psychology, 18, No. 1 (Spring, 1965), p. 4.

⁵Maslow, "A Theory of Human Motivation," op. cit., pp. 370-396.

⁶Maslow later modified this concept for people who are predominantly growth motivated. For such people, gratification does not lead to decreased importance, but instead to increased motivation. Maslow, Toward A Psychology of Being, op. cit.

need level would correlate strongly and positively with the strength (importance) of the next higher need level.

But McGregor states that:

the typical industrial organization offers only limited opportunities for the satisfaction of egoistic needs to people at lower levels in the hierarchy. The conventional methods of organizing work . . . give little heed to these aspects of human motivation.⁷

Dubin also believes that many people do not consider their jobs to be the central focus of their lives, and therefore seek to satisfy higher level needs off the job.⁸ If this is the case with the sample studied, it may be inferred that these civil service employees repress higher level needs while on the job as a result of the lack of opportunities for the satisfaction of higher level needs. Hence, the importance which Maslow states would normally be placed on unfulfilled higher level needs is now redirected back to needs which have already been satisfied to some degree before. Although these needs are relatively satisfied, they do not cease to be important to these civil service employees. Therefore, for lower level, white-collar, civil service employees:

⁷ Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, 1960), p. 38.

⁸ Robert Dubin, "Industrial Workers' Worlds: A Study of the 'Central Life Interests' of Industrial Workers," Social Problems, 3, No. 3 (January, 1956), p. 140.

Hypothesis II: Contrary to Maslow's theory, the strength of a given need does not decrease following its satisfaction, but tends to remain constant.

As assumed above in Hypothesis II, these civil service employees repress higher level needs on the job as a result of the scarcity for opportunities for the satisfaction of higher level needs. This is not to say that these employees would not welcome the opportunity to satisfy higher level needs on the job if such an opportunity offered itself. Hence, despite having repressed higher level needs in the civil service setting, it is felt that the sample would still consider certain characteristics which are lacking in their civil service positions to be important in their new positions if they sought employment outside of the civil service system. From this line of reasoning follows:

Hypothesis III: If individuals were to leave the civil service system, they would desire positions which offer the opportunity to satisfy higher level needs on the job.

ATTITUDE MEASURES

The section of the questionnaire that measured need fulfillment, need satisfaction, and need importance was similar to the questionnaire used in the Porter and Lawler study.⁹ The questionnaire was

⁹Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968).

slightly modified in order to survey civil service employees and was expanded to view attitudes toward physiological needs. It consisted of eighteen items such as:

The opportunity to get all the help and supervision I need:

- a) How much is there now?
(min) 1 2 3 4 5 6 7 (max)
- b) How much should there be?
(min) 1 2 3 4 5 6 7 (max)
- c) How important is this to me?
(min) 1 2 3 4 5 6 7 (max)

The complete listing of the eighteen items is contained in Appendix II. Although the items appear in random order in the questionnaire, they have been preclassified into one of the following need categories:

Physiological

Security: Economic
Dependence

Social

Esteem: Self-Esteem
Esteem of Others

Self-Actualization: Social Welfare
Creativity and Challenge

As can be seen from the above listing, the needs investigated correspond to those in Maslow's theory.

For the purposes of this study, satisfaction is operationally defined as a deficiency measure. Satisfaction is determined by the difference between actual rewards and perceived equitable rewards. If actual rewards are equal to perceived rewards, then

satisfaction results. The degree to which a person is either satisfied or dissatisfied depends on the size of the difference between the actual and perceived equitable rewards. This deficiency measure of satisfaction was obtained through the use of the "Need Satisfaction" section of the questionnaire (see Appendix II). For each item in this section of the questionnaire, a deficiency measure was obtained by subtracting the response to (a) "How much of the characteristic is there now connected with your position?" from the response to (b) "How much of the same characteristic should there be?" The deficiency score represents the difference between ratings on subscales (a) and (b). This score also represents the employee's "satisfaction" with this particular item. Fulfillment is also operationally defined as a measure obtained from the responses to question (a) for each item in Appendix II. The response to (a) "How much of the characteristic is there now connected with your position?" represents the employee's degree of "fulfillment" with that item or the amount of rewards received from it. Importance is operationally defined as a measure obtained from the responses to question (c) for each item in Appendix II. The response to (c) "How important is this position characteristic to you?" represents the degree of importance or need strength that particular item has for the employee.

TESTS OF THE HYPOTHESES

The first hypothesis in this study is concerned with the relationship which exists between satisfied lower level needs

and the importance of high level needs. It is hypothesized that employees with satisfied lower level needs who occupy civil service positions which do not offer the opportunity to fulfill higher level needs on the job will not consider these higher level needs to be important on the job.

In order to test this hypothesis, it was first necessary to determine which of the employees surveyed fit into both classifications--those whose positions do not offer the opportunity to fulfill higher level needs on the job and those with satisfied lower level needs. The means of esteem fulfillment and self-actualization fulfillment (4.3 and 4.1 respectively) for the entire sample served to determine whose positions do not offer the opportunity to fulfill higher level needs on the job. Hence, an employee's score below the average for either esteem fulfillment (4.3) or self-actualization fulfillment (4.1) was interpreted as indicating that his position lacked the opportunity to fulfill higher level needs on the job. Out of the 258 employees sampled, 153 employees occupied positions which were perceived as not offering the opportunity to fulfill higher level needs on the job.

In order to identify those employees with satisfied lower level needs, a weighted average was used to represent the three deficiency (satisfaction) scores of the three lower needs--physiological, security, and social. The weighted average was calculated by summing the scores for each of the needs considered and then dividing by the number of questions asked for

that particular need. Page 57 lists the number of questions which were asked in each need category. The mean of the weighted average for the satisfaction of the lower level needs (1.3) served to identify those employees with satisfied lower level needs. Hence, a score equal to or less than the average identified the employee as having satisfied lower level needs. It should be remembered that with measures of satisfaction, the lower the score, the greater the satisfaction. Out of the 258 employees studied, 149 employees indicated that they had satisfied lower level needs. Therefore, the sample of employees with satisfied lower level needs and who also occupy positions which are not perceived as offering the opportunity to satisfy higher level needs was determined. This sample consisted of 54 employees.

It was also necessary to obtain a weighted average score for the importance (strength) of the two higher level needs. The importance of these higher level needs was classified as either important (1) or unimportant (0) based on the mean of the weighted average score for the higher level needs for the entire sample (5.7). For the classification of the 54 employees determined above, 42 indicated that their higher level needs were unimportant and 12 indicated that they were important.

To test this hypothesis, a test of proportions was conducted on the sample, based on a 50 per cent probability that an employee would consider higher level needs to be either important or unimportant. The null hypothesis was tested to

determine if the difference between the proportions of the two samples was 0. If $z < -1.96$ or $z > 1.96$ ($p < .05$), the null hypothesis was to be rejected. The null hypothesis was to be accepted, or judgment reserved, if $-1.96 \leq z \leq 1.96$. A z-score of 4.08 was obtained ($p < .01$), affirming Hypothesis I and rejecting the null hypothesis. This result is subject to a Type I error in that there is 1 chance out of 100 that the null hypothesis should have been accepted when in fact it was rejected. This hypothesis stated that employees with satisfied lower level needs who occupy civil service positions which are not perceived as offering the opportunity to fulfill higher level needs on the job will not consider these higher level needs to be important.

Hypothesis II compares the satisfaction and importance of the various needs. It is hypothesized that contrary to Maslow's earlier theory, the strength of a given need does not decrease following its satisfaction, but tends to remain constant. In order to test this hypothesis, a weighted average was used to represent the importance (need strength) score and the deficiency (satisfaction) score for each of the five needs for each subject. Each of the satisfaction scores was then correlated with each of the need strength scores. The results are shown in Table 3-1.

The data offer some support for the hypothesis for the physiological, esteem, and self-actualization needs.

Table 3-1
CORRELATIONS BETWEEN NEED SATISFACTION AND NEED IMPORTANCE

Need Satisfaction	Need Importance				
	Physiological	Security	Social	Esteem	Self-Actualization
Physiological	<u>.226*</u>	-.105	-.079	.036	.021
Security	.102	<u>-.026</u>	-.051	.109	.142**
Social	.097	-.064	<u>-.072</u>	.098	.077
Esteem	.155**	-.105	.003	<u>.155**</u>	.105
Self-Actualization	.077	-.150**	-.006	.103	<u>.149**</u>

* = $p < .01$

** = $p < .05$

Hypothesized relationships are underlined

Hypothesis II is supported for the physiological, esteem, and self-actualization needs. Maslow's theory appears to be supported for the security and social needs, but the correlation between security satisfaction and social importance is negative, and the correlation between social satisfaction and esteem importance is not statistically significant.

Adapted from: Douglas T. Hall and Khalil E. Nougaim, "An Examination of Maslow's Need Hierarchy in an Organizational Setting," Organizational Behavior and Human Performance, 3 (1958), p. 20.

Physiological satisfaction correlated highest and positively with physiological importance ($r = .226, p < .01$). Esteem satisfaction correlates equally as high and positively with both esteem and physiological importance ($r = .155, p < .05$). Self-actualization satisfaction correlates about as strongly and positively with self-actualization importance ($r = .149, p < .05$) as with security importance ($r = .150, p < .05$). These correlations and their levels of significance therefore affirm Hypothesis II which states that contrary to Maslow's earlier theory, the strength of a given need does not decrease following its satisfaction but tends to remain constant. Nevertheless, it should be pointed out that the Pearson product-moment coefficients of correlation are low. This indicates that a large amount of unexplained variance exists between the compared items. In addition, the tests of significance are susceptible to Type I errors. The tests of significance which were used also have the limitation of assuming that the data are normally distributed and they assume the variance within cells is homogeneous. Homogeneity is essential for comparability.

Hypothesis III compares the importance placed on needs while employed in the civil service system with the perceived importance which would be placed on needs if employed in private industry. Hypothesis III states that if individuals were to leave the civil service system, they would desire positions which offer the opportunity to satisfy higher level needs on the job.

In order to test this hypothesis, a weighted average was used to represent the importance scores of all five needs as measured by question (c) for each item in the "Need Satisfaction" questionnaire (Appendix II). A weighted average was also used to represent the importance scores as measured in the "Private Business Attraction" questionnaire (Appendix VI). The weighted average for the importance that the employees place on each of the five needs was compared with the weighted average for the importance that they would place on these needs were they to seek employment outside of the civil service system. The differences between the means for each of the five needs were then tested for statistical significance by means of a paired t-test. In a paired t-test, the difference of the two pairs is normally distributed. The results appear in Figure 3-1.

The data do not offer support for the hypothesis. The need importance while employed in the civil service system (dotted line) is above the perceived need importance if in private industry (solid line) for all needs except physiological and self-actualization. In addition, the higher importance for the self-actualization need, which is perceived if in private industry (5.90 versus 5.86), does not offer support for the hypothesis because it is not statistically significant ($t = -.59$, n. s.). Therefore, the data do not support Hypothesis III which states that if individuals were to leave

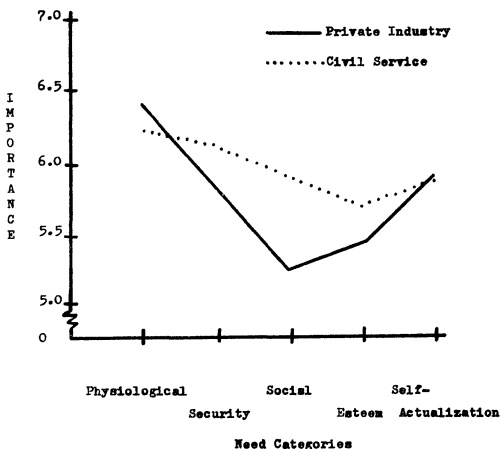


Figure 3-1. Need importance in a civil service setting and as perceived if in private industry.

N: Civil Service = 258; Private Industry = 258. Comparisons by need category--Physiological, civil service (6.23) vs. private industry (6.40): $t = -2.22$, $p < .05$; Security, civil service (6.12) vs. private industry (5.80), $t = 4.65$, $p < .01$; Social, civil service (5.90) vs. private industry (5.27): $t = 6.28$, $p < .01$; Esteem, civil service (5.70) vs. private industry (5.43): $t = 4.05$, $p < .01$; Self-Actualization, civil service (5.86) vs. private industry (5.90): $t = -.59$, n. s.

Source: Primary

the civil service system, they would desire positions which offer the opportunity to satisfy higher level needs on the job.

DISCUSSION OF FINDINGS

The results of the findings of this chapter do not support Maslow's hierarchy of needs theory. Hypothesis I stated that employees with satisfied lower level needs who occupy civil service positions which do not offer the opportunity to fulfill higher level needs on the job will not consider these higher level needs to be important on the job. In testing this hypothesis, a z-score of 4.08 was obtained ($p < .01$), affirming Hypothesis I. Therefore, the data do not offer support for a two-level hierarchy and are contrary to Maslow's theory which would predict a strong relationship between the satisfaction of lower level needs and the importance of higher level needs. A study by Hall and Nougaim produced similar results when they found the correlation between safety satisfaction and higher level need strength to be not greatly different from nonhypothesized correlations.¹⁰ The finding of this hypothesis is also supported by Kuhn, Slocum, and Chase who state:

The worker does not expect to find personal fulfillment at work, so he channels his higher order needs into non-work related activities such as hobbies, home repairs, etc. From the worker's

¹⁰ Douglas T. Hall and Khalil E. Nougaim, "An Examination of Maslow's Need Hierarchy in an Organizational Setting," Organizational Behavior and Human Performance, 3 (1968), p. 26.

standpoint, this may be a very successful adjustment to the conditions of the job which require little use of his abilities and offer limited opportunities to make decisions and satisfy his higher order needs.

These data do offer support for Argyris's suggestion that employees are reducing the number and the importance of the needs that they wish to express while at work.¹² In addition, the data also support Dubin's belief that since many people do not consider their jobs to be the central focus of their lives, they therefore seek to satisfy higher level needs off the job.¹³

While the data for Hypothesis I does indicate that the sample with satisfied lower level needs does not consider higher level needs to be very important on the job, the interpretations of the conclusion are limited. Based on the statistical technique used to test the hypothesis, it cannot be determined if the higher level needs were not considered very important as a result of (1) the sample's desire to fulfill higher level needs off the job; (2) the lack of opportunity to fulfill higher level needs on the job; or (3) the methodology used to test the hypothesis. The statistical technique used cannot indicate a cause-and-effect relationship. The low importance placed on higher level needs may

¹¹ David G. Kuhn, John W. Slocum, Jr., and Richard B. Chase, "Does Job Performance Affect Employee Satisfaction?," Personnel Journal, 50, No. 6 (June, 1971), p. 459.

¹² Argyris, op. cit.

¹³ Dubin, op. cit.

cause the lack of opportunity for higher level need fulfillment, or the lack of opportunity may cause the low importance. Another alternative may be that instead of using the means of lower level need satisfaction, higher level need importance, and higher level need fulfillment, perhaps a better method of determining the relationship would have been to use either the top or bottom third of the appropriate variables. This method would have identified two clearly different groups. In addition, a similar test could be performed on what might be called a Corollary to Hypothesis I. It could test if those employees with satisfied lower level needs who occupy civil service positions which do offer the opportunity to satisfy higher level needs on the job will consider these higher level needs to be important on the job. Such an additional test may indicate that there is a relationship between the perceived opportunity to fulfill higher level needs and the importance of higher level needs on the job.

Hypothesis II states that contrary to Maslow's 1943 theory, the strength of a given need does not decrease following its satisfaction, but tends to remain constant. This hypothesis was partially affirmed for Maslow's 1943 theory. The satisfaction of the physiological, esteem, and self-actualization needs correlate significantly (at least $p < .05$) and positively with their respective need importances. The study by Hall and Nougain cited earlier also found that "with the exception of affiliation, the strength of

each need correlated more strongly with its own satisfaction than with the satisfaction of any other need."¹⁴

The data, shown in Table 3-1, also seem to give some support to Maslow's earlier theory for the security and social needs. For these needs, their satisfaction has a negative correlation with their respective importance. This would seem to support Maslow's 1943 theory which predicts a decrease in the strength of a given need following its satisfaction. But while the correlation between the satisfaction of the security need and its importance is negative ($r = -.026$, n. s.), the correlation between the satisfaction of the security need and the importance of the social need is also negative ($r = -.051$, n. s.). The best support for Maslow's 1943 theory comes from the data for the social need. Here the satisfaction of the social need correlates negatively with its importance ($r = -.077$, n. s.), and it also has a positive correlation with the importance of the esteem need ($r = .098$, n. s.). But the data cannot be used as support because they are not statistically significant.

The findings from Hypothesis II do support Maslow's later theory which states that for growth motivated people, gratification of higher level needs leads to increased, not decreased motivation. The data shown in Table 3-1 indicate that the satisfaction of both higher level needs--esteem and self-actualization--correlates

¹⁴Ibid., p. 19.

positively and significantly with their respective need importances. The correlation coefficient between the satisfaction of the esteem need and its importance is $r = .155$, $p < .05$. The correlation coefficient between the satisfaction of the self-actualization need and its importance is $r = .149$, $p < .05$. Therefore, the findings do offer some support for Maslow's later theory.

Other data gathered in the study are presented in Table 3-2. These data show the importance, perceived opportunity for need satisfaction, and actual need satisfaction for each of the five need areas. A finding is that the civil service employees in the study rank needs in an order that is similar to Maslow's hierarchy: 1) physiological; 2) security; 3) social; 4) self-actualization; and 5) esteem. For the importance of needs, the higher the value, the greater the importance. These data were obtained from question (c) for each item in Appendix II. This ranking of needs conflicts with the ranking of needs discovered by Beer¹⁵ in a survey of a similar sample which consisted of female clerical employees in an insurance company. Beer found that the needs were ranked in the following order of importance: self-actualization, autonomy, social, esteem, and security. This ranking is almost completely opposite the ranking obtained in the present study. It appears from these data that these civil service employees are at a lower stage in their need development than are the subjects of Beer's study.

¹⁵Michael Beer, "Needs and Need Satisfaction Among Clerical Workers in Complex and Routine Jobs," Personnel Psychology, 21, No. 2 (Summer, 1968), pp. 214-215.

Table 3-2
MEAN NEED, PERCEIVED OPPORTUNITY FOR NEED SATISFACTION
AND ACTUAL NEED SATISFACTION

Needs	I		II		III	
	Need Importance		Perceived Opportunity for Need Satisfaction (Fulfillment)		Actual Need Satisfaction	
	Mean	Rank	Mean	Rank	Mean	Rank
Physiological	6.23	1	3.40	5	2.50	5
Security	6.12	2	5.67	1	0.80	2
Social	5.90	3	5.19	2	0.76	1
Esteem	5.70	5	4.31	3	1.38	3
Self-Actualization	5.86	4	4.10	4	1.65	4

Need importance was measured by means of question "c" for each item which appears in Appendix II. The higher the mean, the more important the need is ranked. Fulfillment was measured by means of question "a" for each item which appears in Appendix II. The higher the mean, the greater the perceived opportunity for need satisfaction. Actual need satisfaction was measured by subtracting the response for question "a" from the response to question "b" for each item which appears in Appendix II. The lower the mean, the greater the need satisfaction.

Adapted from: Michael Beer, "Needs and Need Satisfaction Among Clerical Workers in Complex and Routine Jobs," Personnel Psychology, 21, No. 2 (Summer, 1968), p. 215.

The second section of Table 3-2 presents data on the perceived opportunity to satisfy needs. Again, the higher the value, the greater the perceived opportunity to satisfy that need on the job. These data were obtained from question (a) for each item in Appendix II. The data indicate that the employees perceive their jobs as offering the opportunity to satisfy their needs in the following order: 1) security; 2) social; 3) esteem; 4) self-actualization; and 5) physiological. The data show that the employees sampled do not feel that their civil service jobs offer the salaries they feel are necessary to adequately feed, clothe, and house themselves and their families, or that the fringe benefits in terms of group policies are adequate enough to cover their medical and dental needs.

The third section in Table 3-2 presents need satisfaction or need deficiency scores obtained by subtracting question (a) from question (b) for each item in Appendix II. The greater the number, the less the need satisfaction. These data indicate that the civil service system is best at satisfying social (0.76) and security (0.80) needs. "These results are consistent with Maslow's assertion that industrial and business organizations do a better job of satisfying security and social needs than satisfying self-fulfillment needs."¹⁶ This statement and the findings of the present study are supported by the findings of Kuhn, Slocum, and

¹⁶ Alan C. Filley and Robert J. House, Managerial Process and Organizational Behavior (Glenview, Ill.: Scott, Foresman and Company, 1969), p. 375.

Chase cited earlier.¹⁷ The above and the present study both found the satisfaction of three needs to be ranked identically in the following order: 1) social; 3) esteem; and 4) self-actualization. The Kuhn et al. study found the security need to be least satisfied whereas the security need was the second most satisfied need in the present study. One can judge that the degree to which the security need is satisfied results from the type of pay systems used by the two organizations. The Kuhn et al. study surveyed steel mill workers on an incentive wage payment system whereas the present study surveyed salaried civil service employees.

As would be expected from the data presented in the fulfillment section of Table 3-2, employees are least satisfied in their physiological needs (2.50). The fulfillment section indicates that the employees considered their positions to offer the least opportunity to fulfill physiological needs (3.40). This also follows from the importance section which indicates that employees considered their physiological needs to be most important.

Hypothesis III states that if individuals were to leave the civil service system, they would desire positions which would offer the opportunity to satisfy higher level needs on the job. The hypothesis was not confirmed. The security,

¹⁷ Kuhn, Slocum, and Chase, op. cit., p. 458.

social, and esteem needs were considered to be more important in the civil service setting than in private industry, whereas the physiological and self-actualization needs were perceived to be more important if in private industry.

The comparisons for the security, social, and esteem needs indicate that the employees studied feel that these needs are more important to them in the civil service system (dotted line) than if they were to enter private industry (solid line) ($p < .01$).

As already mentioned, the importance for the physiological need is greater if in private industry than if in the civil service system (6.40 versus 6.23; $t = -2.22$, $p < .05$). This result could have been expected after viewing the data in Table 3-2. These data indicate that while the physiological need is number one in importance for the employees surveyed, it has the least opportunity to be fulfilled on the job and it also ranks last of the five needs in being satisfied. Therefore, it follows that these employees would continue to place heavy emphasis on the importance of their physiological needs if they were to enter private industry.

At first glance it appears that Hypothesis III is supported for the self-actualization need. Greater importance is perceived in private industry for the self-actualization need than in the civil service system (5.90 versus 5.86). But even though the comparison is in the predicted direction, it cannot

be used to support Hypothesis III because it is not statistically significant ($t = -.59$, n. s.). Therefore, from the data gathered on Hypothesis III, one can consider that except for physiological needs, the employees studied are content with the opportunity to satisfy needs on the job which exists in the civil service setting.

This chapter investigated: (1) whether a need hierarchy exists for the civil service employees studied; (2) the degree of importance the sample placed on each of the needs in Maslow's hierarchy; and (3) the degree to which the needs in Maslow's hierarchy were fulfilled and satisfied on the job. This chapter also compared the importance which the employees in the study placed on the needs in Maslow's hierarchy while in the civil service system with the perceived importance which would be placed on Maslow's needs if the sample were in private industry.

The next chapter--Satisfaction of Needs--begins the testing of the Porter and Lawler model of motivation. The chapter will investigate the relationships of self-ratings of both performance and effort to measures of need fulfillment and need satisfaction.

Chapter IV

Satisfaction of Needs¹

The relationship, if any, between job satisfaction and job performance has been questioned since Kornhauser and Sharp conducted the first study in this area in 1932.² Since then, studies have tried to determine if a cause-and-effect relationship exists between satisfaction and performance. For the purposes of this study, satisfaction is operationally defined as a deficiency measure. Satisfaction is determined by the difference between actual rewards and perceived equitable rewards. If actual rewards are equal

¹This chapter can be related to Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and the Dorsey Press, 1968), pp. 120-150.

²Arthur W. Kornhauser and A. A. Sharp, "Employee Attitudes: Suggestions from a Study in a Factory," Personnel Journal, 10 (1932), pp. 393-404.

to perceived rewards, then satisfaction results. The degree to which a person is either satisfied or dissatisfied depends on the size of the difference between the actual and perceived equitable rewards. This deficiency measure of satisfaction was obtained through the use of the "Need Satisfaction" section of the questionnaire (see Appendix II). For each item in this section of the questionnaire, a deficiency measure was obtained by subtracting the response to (a) "How much of the characteristic is there now connected with your position?" from the response to (b) "How much of the same characteristic should there be?" The deficiency score represents the difference between ratings on subscales (a) and (b). This score also represents the employee's "satisfaction" with this particular item. Fulfillment is also operationally defined as a measure obtained from the responses to question (a) for each item in Appendix II. The response to (a) "How much of the item is there now connected with your position?" represents the employee's "fulfillment" with that item or the amount of rewards received from it. Performance or productivity refers to a person's accomplishment on the job. The level of performance results from the combination

of effort, abilities and traits, and role perceptions. Performance was measured by subjective self-ratings which the individual made himself.

After the Hawthorne experiments ushered in the human relations movement, researchers assumed that high satisfaction "caused" high performance and felt it necessary to support this assumption with their research. They believed that higher levels of output would result if job attitudes could be improved. Hence, research was based on both curiosity and the desire to increase production.

Despite the fact that most studies yielded only low correlations between job satisfaction and job performance, it was 1955, before a comprehensive review of the literature in this area was made. In that year, Brayfield and Crockett published their review of the research on the relationship between job satisfaction and job performance. They concluded that employee attitudes do not have an appreciable relationship to performance on the job.³ Needless to say, this finding shook the faith of those who were applying the human relations philosophy within their organizations.

Porter and Lawler state that in addition to reviewing the research, Brayfield and Crockett also made a theoretical analysis. One such conclusion of Brayfield and Crockett which Porter and Lawler cite is that:

³ Arthur H. Brayfield and Walther H. Crockett, "Employee Attitudes and Employee Performance," Psychological Bulletin, 52, No. 5 (September, 1955), p. 408.

Satisfaction with one's position in a network of relationships need not imply strong motivation to outstanding performance within that system, and . . . productivity may be only peripherally related to many of the goals toward which the industrial worker is striving.

Porter and Lawler view this quotation as evidence that Brayfield and Crockett were explaining the relationships between attitudes and performance by means of a path-goal approach. As such, productivity is seen as a means to goal attainment. With this view, a positive relationship might be expected between productivity and satisfaction if productivity leads to the achievement of certain goals. Conversely, when production does not lead to these goals, no connection between high productivity and high satisfaction is expected. Hence, Porter and Lawler view the analysis by Brayfield and Crockett as being in general agreement with their theoretical model, as it is presented on page 29 of Chapter I.

In his book, Work and Motivation, Vroom reviewed the research in this area which used correlational analysis.⁵ While Vroom's review contains some of the same studies that were analyzed by Brayfield and Crockett, several new studies were also reviewed. He found a median correlation between measures of job satisfaction and job performance of +.14 for

⁴Brayfield and Crockett, op. cit., p. 421.

⁵Victor Vroom, Work and Motivation (New York: John Wiley and Sons, Inc., 1964), pp. 184-185.

the 23 cases reviewed. While this correlation coefficient is not large, 20 of the 23 correlations were positive.⁶

In analyzing the results of his research, Vroom stated that:

. . . it seems fair to conclude that job satisfaction is closely affected by the amount of rewards that people derive from their jobs and that level of performance is closely affected by the basis for attainment of rewards. Individuals are satisfied with their jobs to the extent to which their jobs provide them with what they desire, and they perform effectively in them to the extent that effective performance leads to the attainment of what they desire.

As a result of these literature reviews, Porter and Lawler felt that there must be some relationship between job attitudes and job performance. Their theoretical model is based on the conditions under which they felt these variables could be expected to be related. Their research, presented in Managerial Attitudes and Performance,⁸ was aimed at determining if such relationships actually exist.

This chapter, as well as the next two chapters, will test certain hypotheses of the Porter and Lawler model on rank and file employees. This chapter considers the relationships between self-ratings of performance and need fulfillment and need satisfaction. Chapter V--Role Perceptions--considers the perception of whether certain traits lead to success in organizations. The relationships

⁶ Ibid., pp. 183-186.

⁷ Ibid., p. 264.

⁸ Porter and Lawler, op. cit.

of role perceptions to self-ratings of performance and self-ratings of effort are also investigated. Chapter VI--Pay Satisfaction--investigates the relationships of pay as a satisfier to self-ratings of effort and self-ratings of performance. These tests are being conducted to see if Porter and Lawler's model, which was designed to examine managerial attitudes, is also relevant for lower level employees. In each chapter, the relevant Porter and Lawler hypotheses will be stated first, then followed by empirical evidence which will serve to affirm or disaffirm the hypotheses, and finally a discussion of the results.

HYPOTHESES

The Porter and Lawler model (page 29) provides for an individual to reward himself for good performance through intrinsic rewards. Porter and Lawler believe that an individual can provide himself with intrinsic rewards (such as feelings of accomplishment), if he believes that he has performed well, even if the organization does not provide extrinsic rewards (such as salary increases or promotions) at a later time. This is felt to be especially true for esteem and self-actualization needs. For intrinsic rewards to be received, it is necessary for the organization to provide the opportunities or job design which would allow the connection between good performance and intrinsic rewards to exist. By assuming that self-administered intrinsic rewards are based on the employee's

perception that he has done a good job, Porter and Lawler feel that self-ratings of performance should be related to feelings of need fulfillment. From this reasoning follows:

Hypothesis P & L I: The higher an individual rates the quality of his own performance, the greater will be his expressed degree of need fulfillment.⁹

In addition to considering the relationship between performance and need fulfillment (rewards) hypothesized above, Porter and Lawler also view the relationship of performance to need satisfaction. Defined in terms of the questionnaire, need satisfaction is the difference between "How much is there now?" and "How much should there be?" Porter and Lawler believe that performance should be more directly connected to need fulfillment (rewards) than to need satisfaction. This is because need fulfillment is but a part of need satisfaction. The degree to which a person's perceived equitable rewards exceed his need fulfillment also has an influence on his need satisfaction.

In order to test this relationship, it is necessary to have three ratings by the employee: his self-rating of the quality of his job performance, the degree of need fulfillment he feels he is receiving from his job, and the amount of

⁹This is Porter and Lawler's Hypothesis 6-B, in Porter and Lawler, op. cit., p. 127.

perceived equitable rewards he feels he should be receiving from his job. Since need satisfaction is defined as the degree of difference between perceived equitable rewards and received need fulfillment, Porter and Lawler feel that high self-ratings of performance do not necessarily indicate more need satisfaction than do low self-ratings of performance. Their reasoning is that persons with high self-ratings of performance will probably have high fulfillment along with high expectations, whereas, persons with low self-ratings of performance will have low need fulfillment with commensurate low expectations. This leads to:

Hypothesis P & L II: An individual's own rating of the quality of his job performance will be related more strongly to his expressed degree of need fulfillment than to his degree of need satisfaction.¹⁰

In addition to performance, Porter and Lawler also view effort as having a relationship with rewards received (need fulfillment) and with the need satisfaction derived from these rewards. This relationship is possible because, in Porter and Lawler's model (page 29), effort is transformed into performance which leads to need fulfillment (rewards) and then to need satisfaction. However, this is not a direct relationship since the relationship of effort to performance is affected by the individual's abilities

¹⁰This is Porter and Lawler's Hypothesis 6-D, ibid., p. 129.

and traits, and by his role perceptions. According to Porter and Lawler, if traits and abilities are high with respect to an assigned task and if role requirements are relatively correctly perceived, then more effort will result in higher performance which should lead to greater rewards. However, increased effort will have little effect on performance and rewards if traits and abilities are low and if role perceptions are incorrect. Porter and Lawler consider the relationship between abilities and traits, role perceptions, and effort to be multiplicative. When low abilities (0) and incorrect role perceptions (0) are multiplied by high effort (1), the result is low performance (0) despite the high amount of effort expended. Therefore, the relationship of effort to rewards (need fulfillment) should be weaker than the more direct relationship between performance and rewards. Porter and Lawler feel that this relationship would hold true as long as rewards are not given directly for effort rather than for performance.

Hypothesis P & L III: An individual's self-rating of performance will be more strongly related to his degree of need fulfillment than will his self-rating of effort.¹¹

¹¹This is Porter and Lawler's Hypothesis 6-E, ibid., p. 130 adapted to examine self-ratings.

ATTITUDE MEASURES

The part of the questionnaire that measured need fulfillment and need satisfaction was similar to the questionnaire used in the Porter and Lawler study. It was slightly modified in order to survey civil service employees, and it was expanded to view attitudes toward physiological needs and pay. It consisted of eighteen items such as:

The opportunity for personal improvement and development in my civil service position:

- a) How much is there now?
(min) 1 2 3 4 5 6 7 (max)
- b) How much should there be?
(min) 1 2 3 4 5 6 7 (max)
- c) How important is this to me?
(min) 1 2 3 4 5 6 7 (max)

A complete listing of the eighteen items is contained in Appendix II. Although the items appear in random order in the questionnaire, they have been preclassified into one of the following need categories:

Physiological

Security: Economic
Dependence

Social

Esteem: Self-Esteem
Esteem of others

Self-Actualization: Social Welfare
Creativity and Challenge

As can be seen from the above listing, the needs investigated are relevant to Maslow's theory.¹²

Following Porter and Lawler's methodology, the answers to the first of the three questions shown above were taken as the measure of need fulfillment for each of the eighteen items investigated. The difference between the perceived equitable fulfillment measured by the second question and the actual fulfillment measured by the first question yields the operational measure of need satisfaction. Hence, the greater the difference between the "should be" and the "is now" questions, the greater the dissatisfaction.¹³ The answers to the third question--"how important?"--were used to measure the amount of importance the individual attached to the various needs.

TESTS OF THE HYPOTHESES

The first hypothesis in this chapter--Hypotheses P & L I--deals with the relationship between need fulfillment and the employees' self-ratings of their performance. It is hypothesized that the higher an individual rates the quality of his own performance, the greater will be his expressed degree

¹²See Chapter I for a detailed discussion of Maslow's theory

¹³For those 114 cases (2.5 per cent) where "should be" responses less than "is now" responses, the differences in that direction were treated as absolute values. Hence, dissatisfaction was indicated in the amount of the difference.

of need fulfillment. This hypothesis predicts that individuals with high self-ratings of performance will express greater need fulfillment than those with low self-ratings of performance.

In order to test this hypothesis, the civil service employees were divided into two groups based on their self-ratings as low (0) or high (1) performers. The mean of the self-ratings (6.2) served as the dividing point of the two groups. The differences between the means of each group's answers to the "How much is there now?" (fulfillment) questions for each need were tested for significance by means of F-tests. The results are shown in Figure 4-1 and Table 4-1. While the group with high self-ratings of performance (solid line) does express greater need fulfillment than the group with low self-ratings of performance (dotted line) in all need areas as predicted (the high self-ratings of performance line is above the low self-ratings of performance line for all need categories), these results cannot be offered as confirmation for Hypothesis P & L I. The differences between the two self-ratings of performance groups for each of the need areas is not statistically significant (instead, the self-actualization need approaches significance at the .06 level of significance). This hypothesis may not have been supported as a result of the division of the sample into groups which were formed on the basis of their self-ratings of performance. The dividing point in the present study was based on the mean of the self-ratings of performance (6.2).

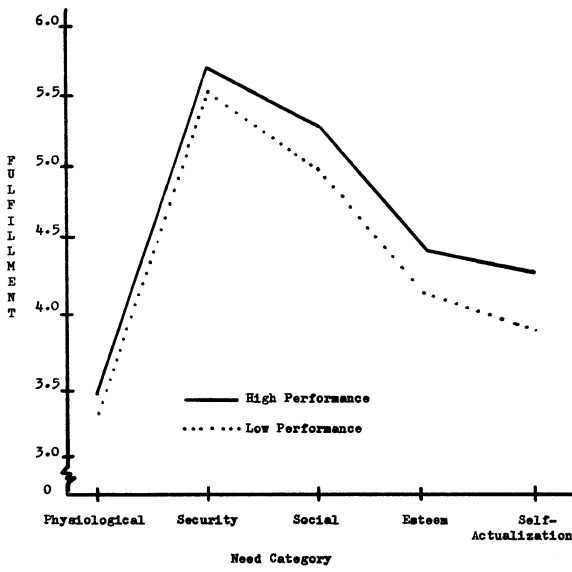


Figure 4-1: NEED FULFILLMENT IN RELATION TO SELF-RATINGS OF JOB PERFORMANCE

N: Low Performance = 154; High Performance = 104. Comparisons by need category--Physiological, low (3.33) vs. high (3.50): n. s.; Security, low (5.60) vs. high (5.77): n. s.; Social, low (5.07) vs. high (5.36): n. s.; Esteem, low (4.19) vs. high (4.48): n. s.; Self-Actualization, low (3.95) vs. high (4.32): n. s.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 134.

Table 4-1
RELATIONSHIP OF FULFILLMENT TO SELF-RATINGS
OF EFFORT AND PERFORMANCE

Self-Rating	Needs				
	Physiological	Security	Social	Esteem	Self-Actualization
<u>Effort</u>					
Low	3.37	5.83	5.28	4.06	3.86
High	3.44	5.50	5.09	4.55	4.35
F-Value	1.27	2.40	0.66	4.30	3.34
Significance Level	n.s.	n.s.	n.s.	< .05	< .05
<u>Performance</u>					
Low	3.33	5.60	5.07	4.19	3.95
High	3.50	5.77	5.36	4.48	4.32
F-Value	0.72	1.71	2.45	2.89	3.61
Significance Level	n.s.	n.s.	n.s.	n.s.	< .06

In viewing the above table, it can be seen that the employees surveyed feel that their fulfillment is more closely related to the amount of effort expended than to their performance. The comparisons indicate that fulfillment was related significantly to self-ratings of effort for the esteem and self-actualization needs, while it was not significantly related to any of the needs for the performance ratings.

Source: Primary

Perhaps this type of division did not create two clearly different groups. A better method may have been to divide the sample based on the top and bottom thirds of the responses to that item.

The next hypothesis--Hypothesis P & L II--compares need fulfillment to need satisfaction in terms of the employees' self-ratings of job performance. It was predicted that an individual's own rating of the quality of his job performance will be related more strongly to his expressed degree of need fulfillment than to his degree of need satisfaction. The civil service employees were again divided into two groups based on their self-ratings as high (1) or low (0) performers. The mean of the self-ratings (6.2) served as the dividing point of the two groups. The differences between the means of their need dissatisfaction scores (deficiency scale of expected equitable need fulfillment minus received need fulfillment) for each of the five need areas were tested for statistical significance. The results are shown in Figure 4-2. The group with high self-ratings of performance (solid line) expressed greater need dissatisfaction for all need areas than did the group with low self-ratings of performance (dotted line). This figure and Figure 4-1 are both relevant to Hypothesis P & L II.

A comparison of Figure 4-1 for need fulfillment and Figure 4-2 for need satisfaction cannot be made visually based on the apparent

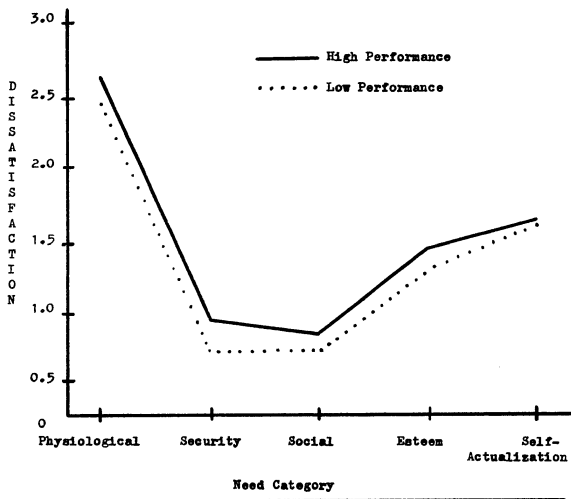


Figure 4-2: NEED DISSATISFACTION IN RELATION TO SELF-RATINGS OF JOB PERFORMANCE

N: Low Performance = 154; High Performance = 104. Comparisons by need category--Physiological, Low (2.44) vs. High (2.60): n. s.; Security, Low (0.71) vs. High (0.93): n. s.; Social, Low (0.71) vs. High (0.82): n. s.; Esteem, Low (1.31) vs. High (1.50): n. s.; Self-Actualization, Low (1.63) vs. High (1.67): n. s.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 138.

separation between the high and low self-rated performers for the two graphs. This is not possible because the ordinate of one graph is a scale of need fulfillment while the ordinate of the other graph is a scale of need dissatisfaction. In order to compare these two graphs, the F-values for the differences between the high and low self-rated performance groups for each need area must be viewed separately for each graph. This is done in Table 4-2. This table indicates that high and low self-rated performers are more statistically separated, in all need areas except security, on their need fulfillment than on their need dissatisfaction. This would seem to offer support for Hypothesis P & L II. However, since none of the F-values are significant, it must be stated that Hypothesis P & L II lacks confirmation. Again, this hypothesis may not have been supported as a result of using the mean of the self-ratings of performance as the dividing point. Perhaps if the top and bottom thirds of the responses were used, two clearly different groups would be identified.

Table 4-2. Comparisons of F-values for the differences between the two groups of self-rated performers in Figure 4-1 and Figure 4-2. None of these values are significant.

Need Areas	Fulfillment	Dissatisfaction
Physiological	0.72	0.64
Security	1.17	2.65
Social	2.45	0.57
Esteem	2.89	1.78
Self-Actualization	3.61	0.04

Source: Primary

Hypothesis P & L III predicted that an individual's self-rating of performance will be more strongly related to his degree of need fulfillment than will his self-rating of effort. Figures 4-3 and 4-1 and Table 4-1 provide the relevant data for this hypothesis. This hypothesis follows directly from the Porter and Lawler model (page 29). There it can be seen that more variables exist between effort and fulfillment (rewards) than between performance and fulfillment. To test this hypothesis, the sample was divided into two groups based on their self-ratings of whether they expend a high (1) or low (0) amount of effort on the job. The mean of the self-ratings on effort (6.2) served as the dividing point for the two groups. The differences between the means of the answers to the "How much is there now?" (fulfillment) questions for each of the five needs were tested for statistical significance.

In viewing Figures 4-3 and 4-1 and Table 4-1, it can be seen that the employees surveyed feel that their fulfillment (rewards) is more closely related to their self-ratings on the amount of effort expended than to their self-ratings of performance. The comparisons in Table 4-1 indicate that fulfillment was related significantly to self-ratings of effort for the esteem and self-actualization needs [esteem, low effort (4.06) versus high effort (4.55): $p < .05$; self-actualization, low effort (3.86) versus high effort (4.35): $p < .05$] while it was not significantly related to any of the needs for the performance

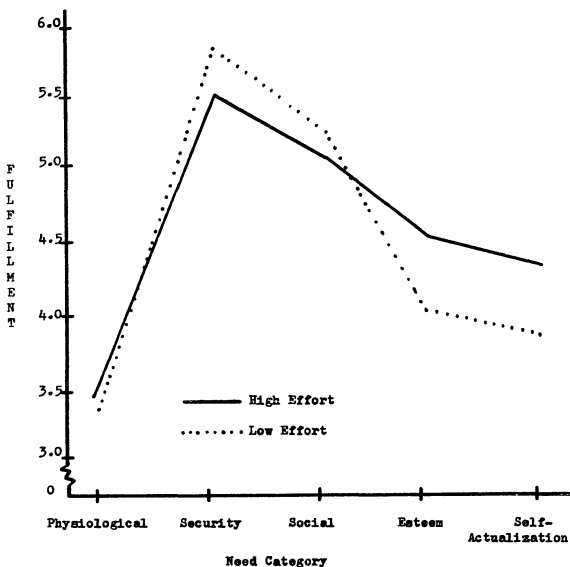


Figure 4-3: NEED FULFILLMENT IN RELATION TO SELF-RATINGS OF EFFORT

N: Low Effort = 130; High Effort = 128. Comparisons by need category--
 Physiological, Low (3.37) vs. High (3.44): n. s.; Security, Low
 (5.83) vs. High (5.50): n. s.; Social, Low (5.28) vs. High (5.09):
 n. s.; Esteem, Low (4.06) vs. High (4.55): $F = 4.30$, $p < .05$; Self-
 Actualization, Low (3.86) vs. High (4.35): $F = 3.34$, $p < .05$.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 140.

ratings. Hence, the hypothesis is disaffirmed. Again this hypothesis may not have been supported as a result of using the mean of the self-ratings of performance and of effort as the dividing point for the high and low self-rated groups. If the top and bottom thirds of the responses had been used, perhaps two clearly different groups would have been identified.

DISCUSSION OF FINDINGS

The results reported in this chapter indicate that the predictions expected from the fulfillment section of the Porter and Lawler model did not ensue. Significant relationships were predicted between certain attitudes and self-ratings of performance, but these were not obtained.

The first hypothesis tested predicted that the higher an individual rates the quality of his own performance, the greater will be his expressed degree of need fulfillment. Therefore, if the organization was willing to provide intrinsic or extrinsic rewards based on performance differences, then high self-rated employees should feel greater need fulfillment than lower self-rated employees. This hypothesis was not confirmed for the civil service employees tested (none of the comparisons of high versus low self-rated performers were statistically significant), but the results were in the predicted direction since the high self-ratings of performance line was above the low self-ratings of

performance line. These results indicate that the civil service employees in the study who feel that they are doing an especially good job do not feel that their job is providing them with much more fulfillment than do the jobs of those in the low self-rated performance group. One possible reason for the lack of support for this hypothesis is that the civil service system does not reward differential performance, either through merit pay increases (extrinsic rewards) or through decision making responsibilities or job complexity (intrinsic rewards). Another possible reason for the lack of support for this hypothesis may be a result of the limitations of the methodology used to determine the composition of the low and high self-rated performance groups. The mean of the self-ratings of performance (6.2) served to divide the sample into low and high groups. As a result of the small amount of variance from the mean (.68), perhaps a better basis for determining the composition of the high and low self-rated groups would have been to utilize only the top and bottom thirds of the self-ratings of performance. Such a division based on top and bottom thirds of the responses may have been a better method of identifying two clearly different groups. Although the data do not indicate it as such, the lack of significant differences in need fulfillment may be a result of the impersonal, bureaucratic structure of the organization, the rigid promotion and pay policies, or possibly a lack of intrinsic feelings which should accompany the performance

of the job. Porter and Lawler anticipated the lack of confirmation for this hypothesis when they predicted that Hypothesis P & L I:

. . . is more likely to be confirmed for managers than for nonmanagement employees. The reasoning here would involve the assumption that management jobs, in contrast to nonmanagement jobs, by their very nature are relatively more likely to contain a higher percentage of challenging tasks leading to feelings of self-esteem and growth when the individual believes he has performed well.¹⁴

The Porter and Lawler model was also unsuccessful in predicting--for the employees in this study--that the relationship between employees' self-ratings of performance and their need fulfillment would be stronger than the relationship between their self-ratings and their need satisfaction. Hypothesis P & L II stated that an individual's own rating of the quality of his job performance will be related more strongly to his expressed degree of need fulfillment than to his degree of need satisfaction. As a result of the statistically nonsignificant results obtained, this hypothesis was not confirmed.

In viewing Figure 4-2, it is seen that high self-rated performers are more dissatisfied in all need areas than low self-rated performers with the level of rewards received (the high self-ratings of performance line is above the low self-ratings of performance line for all need categories). From this figure and Figure 4-1, it can be concluded that when a civil service

¹⁴Porter and Lawler, op. cit., p. 127.

employee feels he has done a good job, he is not likely to feel that he has been any more highly rewarded than a low performer. In addition, while the data are not significant, Figure 4-2 does indicate that the high self-rated performer is more likely to be less satisfied in receiving the same rewards as low self-rated performers. The reason for this may be that his perceived level of equitable rewards is not significantly higher than that of the low self-rated performer because he is aware of the system by which rewards are given by the organization. This may be a result, in part, of the impersonality of the bureaucratic civil service structure or the rigid promotion and pay policies under which he works. In the civil service organization in the present study, rewards may not be perceived as being contingent upon performance. Employees may perceive rewards to be distributed randomly and as being contingent upon factors other than performance such as age and seniority. As a result of their study on reward systems, Cherrington, Reitz, and Scott found random reward systems to yield correlations between satisfaction and performance to be near zero.¹⁵ In a random reward system, rewards are not distributed on the basis of performance, but both high and low performers may receive rewards. The present study found the following correlations between self-ratings of performance and the satisfactions reported

¹⁵David J. Cherrington, H. Joseph Reitz, and William E. Scott Jr., "Effects of Contingent and Noncontingent Reward on the Relationship Between Satisfaction and Task Performance," Journal of Applied Psychology, 55, No. 6 (December, 1971), pp. 531-536.

for the five need areas in Maslow's hierarchy: (1) physiological: .057; (2) security: .041; (3) social: .010; (4) esteem: .021; and (5) self-actualization: -.050. Therefore, based on the Cherrington et al. finding that correlations between performance and satisfaction are near zero in organizations which use random reward systems, it can be concluded that rewards are not contingent upon performance in the civil service organization studied.

At the same time, a high self-rated performer appears to be dissatisfied because of the same dysfunctions of bureaucracy mentioned above. He feels that he should be more highly rewarded than a low performer for his good performance, but he cannot be as a result of the promotion and pay policies which exist (rewards are not contingent upon performance). The result is dissatisfaction or frustration for the high performer. This concept is supported by a study conducted by Greene who states that "while the high performer feels deprived compared to the low performer, the low performer is satisfied with his relative pay,"¹⁶ Lawler supports this finding by stating that:

. . . in a situation where the good performing employees are rewarded the same as poor performing employees, a negative relationship should exist between satisfaction and performance because the better performers will be experiencing the same level of rewards as the poor performers, but will feel they should be rewarded more highly. In short, the good performers will have a

¹⁶Charles N. Greene, "Causal Connections Among Managers' Merit Pay, Job Satisfaction, and Performance," Personnel Psychology, 23, No. 2 (Summer, 1970), p. 226.

greater discrepancy between what they receive and what they feel they should receive.¹⁷

Two studies which investigated the relationship of need satisfaction to performance and arrived at different conclusions than the present study were conducted by Slocum on top-, middle-, and lower-level managers.¹⁸ He found that his research supported the general prediction of the Porter and Lawler model that an individual's degree of higher order need satisfaction is related to his performance. The satisfaction of autonomy and self-actualization needs were more closely related to performance than the satisfaction of the security need. However, in some cases the satisfaction of the esteem need had a weaker relationship with performance than did the satisfaction of security needs. Based on the findings of his data, Slocum states that the prediction of the Porter and Lawler model that the satisfaction of higher level needs is more closely related to performance (than is the satisfaction of lower level needs) is only partially supported.

¹⁷ Edward E. Lawler, III, "Job Attitudes and Employee Motivation: Theory, Research, and Practice," Personnel Psychology, 23, No. 2 (Summer, 1970), p. 226.

¹⁸ John W. Slocum, Jr., "Performance and Satisfaction: An Analysis," Industrial Relations, 9, No. 4 (October, 1970), 431-436; _____, "Motivation in Managerial Levels: Relationship of Need Satisfaction to Job Performance," Journal of Applied Psychology, 55, No. 4 (August, 1971), pp. 312-316.

A study by Kuhn, Slocum, and Chase also resulted in different findings than the present study.¹⁹ They examined Maslow's theory of motivation as it applies to the performance of nonmanagerial employees. The study sought to determine the relationship of performance to the satisfaction of both lower and higher level needs as predicted by Porter and Lawler's model. They found that the satisfaction of lower level needs (extrinsic rewards) was more closely related to performance than the satisfaction of higher level needs (intrinsic rewards). They explain their findings as suggesting that the incentive pay system under which the employees operated served as a reinforcement to the relationship between extrinsic rewards and performance.

The last hypothesis tested in this chapter--Hypothesis P & L III--predicted that an individual's self-rating of performance will be more strongly related to his degree of need fulfillment than will his self-rating of his effort. This hypothesis was partially disaffirmed, since self-ratings of effort for the higher level needs were statistically significant in relation to reports of need fulfillment (esteem: $p < .05$ and self-actualization: $p < .05$). None of the self-ratings of performance were significant in relation to need fulfillment (see Table 4-1).

¹⁹ David G. Kuhn, John W. Slocum, Jr., and Richard B Chase, "Does Job Performance Affect Employee Satisfaction?", Personnel Journal, 50, No. 6 (June, 1971), pp. 455-459 and 485.

Since it has been stated previously that the higher order needs such as esteem and self-actualization are related only to intrinsic rewards which the individual gives himself, it may be suggested from Figure 4-3 that the employees who rate themselves high in effort expended may possibly be giving themselves intrinsic rewards through feelings of accomplishment. In addition, the lack of statistically significant relationships between fulfillment and both the self-ratings on performance and effort for the lower level needs can be interpreted as the organization gives extrinsic rewards for effort about as much as it does for performance.

It was indicated by Figure 4-1 that employees who rate their performance as high do not expect any greater fulfillment (rewards) than do lower self-rated performers (comparisons of high and low self-rated performers were not statistically significant for any of the five need categories). The explanation offered for this occurrence was that they accept the fact that the organization, through its rigid promotion and pay policies, rewards all levels of performance equally. Based on the results of these data, it follows that a high self-rated performer cannot expect to have his performance rewarded, and since a person who expends a high degree of effort cannot expect to receive any greater extrinsic rewards from the organization than a person expending a lower degree of effort, it is up to the individual to reward himself for his high effort.

Therefore, although it cannot be confirmed with these data, it may be possible that the civil service employees in this study who rate themselves high in effort expended are rewarded by giving themselves intrinsic rewards for the higher level needs.

In summary, out of the three testable predictions derived from these three hypotheses, two were not confirmed and one was disaffirmed. Hypothesis P & L III, which was disaffirmed, had results which turned out significantly in the opposite direction from that predicted. These results have certain effects on the Porter and Lawler model (Figure 4-4). Although effort is further removed from rewards (or fulfillment) in the model than is performance, these data indicate that for the higher level need areas, self-ratings of effort are more strongly related to fulfillment than are self-ratings of performance for the sample in this study. For the lower level need areas, self-ratings of effort appeared to be just as strongly related to fulfillment as was self ratings of performance (Hypothesis P & L III). It was found that self-ratings of performance and rewards were not significantly related as was predicted by Hypothesis P & L I. In addition, it was found that self-ratings of performance and need satisfaction were not significantly related. Hence, as predicted by Porter and Lawler, the data indicate that satisfaction is no more closely related to self-ratings of performance than is fulfillment (Hypothesis P & L II).²⁰

²⁰Porter and Lawler, *op. cit.*, p. 148.

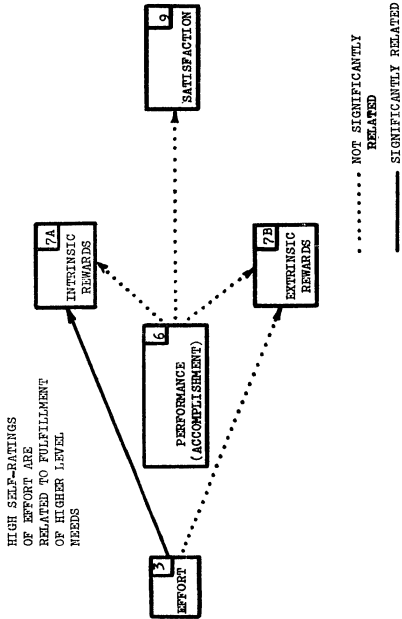


Figure 4-4. Modifications of Porter and Lawler's theoretical model of motivation based on the findings of Chapter IV.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 165.

This chapter discussed the satisfaction of needs as they are explained by Maslow in his hierarchy of needs theory and applied this discussion to Porter and Lawler's model of motivation. The relationships of need satisfaction and need fulfillment to self-ratings of performance and of effort were examined. The next two chapters will examine the predictions of the Porter and Lawler model concerning role perceptions and pay satisfaction. The same definitions and statistical techniques used in this chapter will also apply in the following chapters.

Chapter V

Role Perceptions¹

Porter and Lawler's model (discussed in Chapter I) is based on the assumption that there is an important relationship between an employee's role perception and the quality of his job performance. From this it follows that despite the amount of effort an employee puts forth, good performance is unlikely to result unless the direction of his role perception is "correct" for his job. Porter and Lawler believe that if evidence is shown that employees' role perceptions, measured on Riesman's "inner-, other-directed" dimension, can be consistently related to effective job performance, this will be in support of their model.

VIEWS OF SUCCESS IN ORGANIZATIONS

As they tested their concept of role perceptions, Porter and Lawler saw the opportunity to test the validity of the "inner-, other-directed" dimension of David Riesman and the "conformity-required" view of big business held by William H. Whyte, Jr. Both Riesman and Whyte question if forcefulness,

¹This chapter can be related to Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), pp. 98-119.

independence, and imagination are among the managerial qualities that lead to success in business today.

Riesman, in his book, The Lonely Crowd,² viewed success in business today as dependent upon "other-directed" role perceptions. In describing Riesman's thinking, Porter and Lawler have stated that an individual with such perceptions uses the thinking and desires of his associates to guide his own thoughts and actions. This behavior is thought to be typical of salaried employees in bureaucracies. The opposite view describes the "inner-directed" person. The inner-directed person is less "sensitive" to or dependent upon others for his ideas and values.

The Organization Man³ of Whyte also considers the type of behavior necessary to succeed in large organizations. According to Whyte, the "organization man" is required to conform and therefore must give up some of his individuality and creativity if he is to be successful. Both Riesman and Whyte have essentially the same opinion as to what is necessary to succeed in business. This thesis will be investigated later in this chapter.

²David Riesman, The Lonely Crowd, (New Haven, Conn.: Yale University Press, 1950).

³William H. Whyte, Jr., The Organization Man, (New York: Simon and Schuster, 1956).

Research cited by Porter and Lawler tends to disaffirm the views of Riesenman and Whyte.⁴ Fleishman and Peters found that those managers who scored lower on conformity were rated higher on job performance by their supervisors.⁵ This finding was confirmed later by Hay in a follow-up study.⁶ Roadman's findings were also in agreement with those of Fleishman and Peters.⁷ He found that managers who were rated by their peers as possessing creativity, forcefulness, and independence (but low on tactfulness and cooperation) received the majority of promotions. Porter and Henry viewed managers' perceptions of how important ten personality-type traits were for success in their managerial positions.⁸ Five of these traits were considered to describe inner-directed behavior, and five described other-directed behavior. The findings were interpreted to mean that large organizations positively reward inner-directed behavior.

⁴Porter and Lawler, op. cit., pp. 101-103.

⁵Edwin A. Fleishman and David M. Peters, "Interpersonal Values, Leadership Attitudes, and Managerial 'Success'," Personnel Psychology, 15, No. 2 (Summer, 1962), pp. 127-143.

⁶John Earl Hay, "The Relationship of Certain Personality Variables to Managerial Level and Job Performance Among Engineering Managers," Miss. Temple University, 1964.

⁷Harry E. Roadman, "An Industrial Use of Peer Ratings," Journal of Applied Psychology, 48, No. 4 (August, 1964), pp. 211-214.

⁸Lyman W. Porter and Mildred M. Henry, "Job Attitudes in Management: V. Perceptions of the Importance of Certain Personality Traits as a Function of Job Level," Journal of Applied Psychology, 51 (1965), 23-31.

HYPOTHESES

Porter and Lawler believe that if an employee does not perceive his role as the organization perceives it (incorrect role perception), effective job performance will not result. Conversely, if the employee's perception of his role and the organization's perception of it are aligned (correct role perception), then effective job performance will result. Therefore, if this is true and ability and motivation are maintained at a constant level, then it follows that employees with correct role perceptions will be more effective performers than employees with incorrect role perceptions. For the purposes of this study, motivation is operationally defined as the combination of the value of rewards and the perceived probability that effort will lead to rewards. Since the evidence cited above indicates that inner-directed behavior was rewarded by the organizations studied, then it can be expected that other organizations should also reward persons whose role perceptions are in the direction of inner-directed behavior. This leads to the first hypothesis.

Hypothesis P & L IV: The more individuals see their jobs as demanding inner-directed behavior, the higher they will rate themselves on quality of job performance.⁹

Since self-ratings were obtained from each individual sampled on the amount of effort he puts forth, it is possible

⁹This hypothesis is adapted from Porter and Lawler's Hypothesis 5-A, op. cit., p. 104.

to state another hypothesis. This hypothesis follows from Porter and Lawler's suggestion that a multiplicative relationship exists between effort, abilities, and role perceptions. If any one of these three determinants of performance is low, it is unlikely that the others will be able to compensate. The result is lower performance. From this logic follows:

Hypothesis P & L V: The relationship between role perceptions and performance will be greater [have a higher self-rating of performance] for those individuals who rate themselves high on effort than it will for those individuals who rate themselves low on effort.¹⁰

ATTITUDE MEASURES

The role perceptions of the employees were measured by asking them to rank 12 personality-type traits. This section of the questionnaire appears in Appendix V and is identical to that used by Porter and Lawler and by Porter and Heary. Part of the instructions were as follows:

The purpose of this part of the questionnaire is to obtain a picture of the traits you believe are most necessary for success in your present civil service position.

Below is a list of 12 traits arranged randomly. Rank these 12 traits from 1 to 12 in order of their

¹⁰ This hypothesis is adapted from Porter and Lawler's Hypothesis 5-B, ibid.

importance for success in your present civil service position.

As with the Porter and Lawler study, two items--intelligence and efficiency--were included in the list to disguise the dimension being studied. When the data were analyzed, these two items were eliminated. The traits were then reranked from 1 to 10 with the appropriate remaining traits being elevated in rank as replacements for those which had been removed. Although the respondents were asked to rank the most important trait with a score of 1, the order was reversed during analysis, and the most important trait was given the score of 9. Since high numbers mean "more important" in Table 5-1, 9 represents maximum importance and 0 indicates minimum importance. The ten relevant traits are listed below in the two clusters described by Riesenman and Whyte:

Inner-Directed Cluster

Forceful
Imaginative
Independent
Self-confident
Decisive

Other-Directed Cluster

Cooperative
Adaptable
Cautious
Agreeable
Tastful

Cluster scores were computed for each individual by summing his ranks for the five traits in either cluster. This cluster score was then subtracted from 45 (the sum of the digits from 0 to 9) to determine the score for the other cluster. A high score on a given dimension meant that the

five traits that made up that dimension were all rated as relatively important.

TESTS OF THE HYPOTHESES

Hypothesis P & L IV predicted that the more individuals see their jobs as demanding inner-directed behavior, the higher they will rate themselves on quality of job performance. In order to test this hypothesis, the sample was divided into two groups based on their belief that either inner-, or other-directed behavior is most important for success in their civil service positions. This was measured by Section V of the questionnaire which appears in Appendix V. The difference between these two groups was based on their self-ratings of job performance and was tested by means of an F-test ($F = 6.92$). Figure 5-1 represents the data that are relevant to Hypothesis P & L IV. As can be seen, there is a significant trend ($p < .01$) for those who have high inner-directed scores ($N = 48$) to rate themselves higher on job performance than do these employees who have low inner-directed cluster scores ($N = 210$).

Table 5-1 presents the mean ranking for each trait by high and low self-rated performance groups. Two out of five inner-directed traits (self-confidence and decisiveness) are rated as more important by the high self-rated performers and four out of five of the other-directed traits (cooperative, adaptable, tactful, and agreeable) are rated as more important

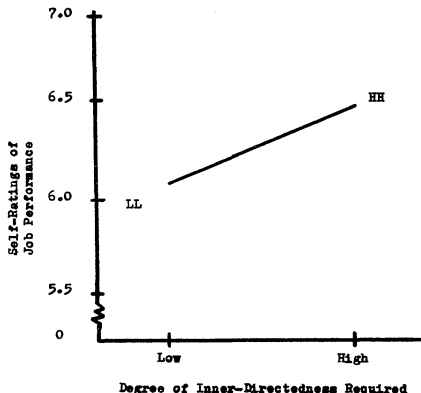


Figure 5-1. Mean self-ratings of job performance for high and low inner-directed groups.

N: Low Inner-Directedness (LL) = 210; High Inner-Directedness (HH) = 48. Comparison--LL (6.11) vs. HH (6.46); $F = 6.92$, $p < .01$.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 108.

Table 5-1
MEAN RANKING OF TRAITS BY THE HIGH AND LOW
SELF-RATED GROUPS ON QUALITY OF JOB PERFORMANCE

Inner-Directed Traits	Low Performers (N = 154)	High Performers (N = 104)
Forceful	1.3	1.7
Imaginative	2.9	2.8
Independent	3.5	3.9
Self-Confident	5.7	6.4
Decisive	<u>4.2</u>	<u>5.0</u>
	$\Sigma = 17.6$	$\Sigma = 19.8$
<hr/>		
Other-Directed Traits		
Cooperative	7.3	6.8
Adaptable	5.7	5.5
Cautious	3.2	2.7
Agreeable	5.4	4.9
Tactful	<u>5.6</u>	<u>5.3</u>
	$\Sigma = 27.2$	$\Sigma = 25.2$

In the table above, high numbers mean "more important." Thus 9 is maximum and 0 is minimum. Two out of five inner-directed traits (self-confidence and decisiveness) are rated as more important by the high rated performers and four out of five of the other-directed traits (cooperative, adaptable, tactful, and agreeable) are rated as more important by the low rated performers.

Adapted from Lyman W. Porter and Edward E. Lawler, III,
 Managerial Attitudes and Performance (Homewood, Ill.:
 Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 109.

by the low self-rated performers. Hence, a difference does appear to exist between the high and low performance groups, despite the fact that both groups clearly possess other-directed traits. The relationship in Figure 5-1 is statistically significant ($p < .01$) in the predicted direction (self-ratings of performance are higher for those with inner-directed traits than those with other-directed traits), and the individual inner-directed traits tend to be associated in the expected direction with the performance measures.

Hypothesis P & L V predicted that the relationship between role perceptions and performance will be stronger for those individuals who rate themselves high on effort than it will be for those individuals who rate themselves low on effort. In order to test this hypothesis, the employees were divided into two groups on the basis of how much effort they reported they put forth on the job. The mean of the self-ratings on effort (6.2) served as the dividing point. Within the two effort groups, the employees were divided again, this time on the basis of their inner-directed cluster scores. Hence, high ($N = 17$) and low ($N = 113$) inner-directed employees were obtained for the low self-rated effort level as well as for the high self-rated effort level (N : high = 31; low = 97).

Figure 5-2 presents the relevant data for this hypothesis. Although the performance differences between the high and low inner-directed groups are in the expected direction (high self-ratings of effort line is above the low self-ratings of effort line, and the slope of both is increasing from low to high inner-directedness), the relationships are not statistically significant for the employees who rate themselves either high or low on effort. Therefore, the results do not fully support the hypothesis.

DISCUSSION OF THE FINDINGS

The evidence of this study seems to suggest, as predicted by the Porter and Lawler model, that role perceptions can have an influence on job performance. But at the same time, the evidence does support Riesman's and Whyte's views about the place of other-directed behavior in American industry. While this appears to be a contradiction, in reality it is not. The writings of Riesman and Whyte viewed managers, whereas this study examined lower-level, white-collar employees. As can be seen from Table 5-1, the employees surveyed overwhelmingly consider the exhibition of other-directed traits to be most important for success in their civil service positions. But those who rate themselves as high performers do tend to act with a greater amount of inner-directed behavior. This larger amount of inner-directed behavior by the high self-rated performers

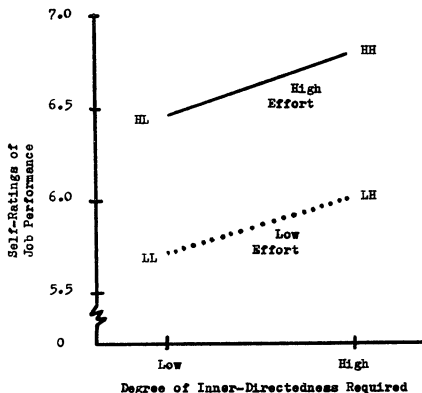


Figure 5-2. Mean self-ratings of job performance for high and low inner-directed groups with two levels of effort.

N: Low Inner-Directedness, Low Effort (LL) = 111; High Inner-Directedness, Low Effort (LH) = 17; Low Inner-Directedness, High Effort (HL) = 100; High Inner-Directedness, High Effort (HH) = 30. Comparisons by inner-directedness--LL (5.72) vs. LH (6.00), $t = .36$, n. s.; HL (6.48) vs. HH (6.80), $t = .36$, n. s.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 113.

offers some support for Porter and Lawler's model by confirming Hypothesis P & L IV.

Porter and Lawler's model considers role perceptions to be one of the two variables used by an employee to convert his efforts into job performance. The relationship of role perceptions to performance was examined by Hypothesis P & L IV. This hypothesis states that the more individuals see their jobs as demanding inner-directed behavior, the higher they will rate themselves on quality of job performance. Therefore, a relationship was expected to exist between role perceptions and job performance, and one was found. Figure 5-1 shows the mean self-ratings of job performance for high and low inner-directed groups. The group which sees their jobs as demanding inner-directed behavior rates their performance higher than the group which sees their jobs as demanding other-directed behavior. The difference between the two groups is statistically significant ($p < .01$). Figure 5-3 illustrates how this finding affects the Porter and Lawler model.

The question remains as to the cause of this relationship. Porter and Lawler's model may be correct in predicting that role perceptions are one of the variables leading to performance. Another explanation may be that performance leads to role perceptions. Still another explanation is that a third undetermined variable exists which may cause both to occur.

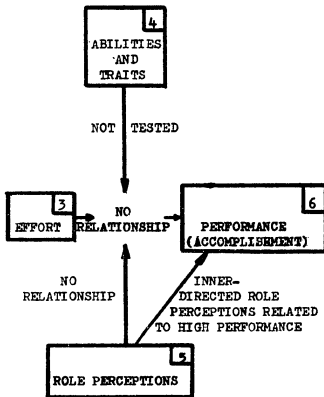


Figure 5-3. Modifications of Porter and Lawler's theoretical model of motivation based on the findings of Chapter V.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 165.

Porter and Lawler indicate that motivation might be the third variable which caused the relationship between role perceptions and job performance, but later discounted its value. For the purposes of this study, motivation is operationally defined as the combination of the value of rewards and the perceived probability that effort will lead to rewards. In the present study motivation was also eliminated as the cause of the relationship as a result of the existence of the relationship between role perceptions and self-ratings of job performance when effort was held constant. The results of this relationship are illustrated in Figure 5-1 which is based on Hypothesis P & L IV. The relationship is statistically significant ($p < .01$). When self-ratings of effort were allowed to vary, no relationship was found between role perceptions and self-ratings of job performance. Therefore, self-ratings of effort can also be eliminated as the variable which causes the relationship between role perceptions and self-ratings of performance. This relationship was examined by Hypothesis P & L V and the results are shown in Figure 5-2. This hypothesis states that the relationship between role perceptions and performance will be stronger for those individuals who rate themselves high on effort than it will be for those individuals who rate themselves low on effort. No statistically significant relationships were found. Therefore, based on this evidence, neither motivation nor effort can be considered to have caused either role perceptions or job performance. Figure 5-3 illustrates how this finding affects the Porter and Lawler model.

The question of whether role perceptions cause performance or performance causes role perceptions cannot be answered with these data as it could not be answered by Porter and Lawler's study. While Porter and Lawler rationalized that role perceptions led to performance in their study, the same conclusion cannot be drawn from the present study. As the present data indicate, there is no relationship between self-ratings of effort and role perceptions as is predicted by Porter and Lawler's model. Therefore, it appears that the self-ratings of performance differences illustrated by Figure 5-1 between the high and low inner-directed groups are not as a result of motivational or effort differences but as a result of how effort is applied on the job. Since the results of Hypothesis P & L V (Figure 5-2) show that the self-ratings of the amount of effort expended has no effect on self-ratings of performance, then from the results of Hypothesis P & L IV (Figure 5-1) it appears to follow that it is the direction in which effort is applied or role perceptions (inner- or other-directed behavior) which affect performance. While this sounds feasible, Table 5-1 illustrates that little difference exists between the role perceptions of high and low self-rated performers. Therefore, rather than role perceptions causing performance, it may be suggested that ability or experience are the factors that high inner-directed employees convert into performance more effectively than do low inner-directed employees.

The entire sample ranked the inner-, other-directed traits as having the following importance:

- | | |
|------------------------------------|----------------------|
| 1. Cooperative: O.D. ¹¹ | 6. Decisive: I.D. |
| 2. Self-confident: I.D. | 7. Independent: I.D. |
| 3. Adaptable: O.D. | 8. Cautious: O.D. |
| 4. Tactful: O.D. | 9. Imaginative: I.D. |
| 5. Agreeable: O.D. | 10. Forceful: I.D. |

A tenuous explanation can be offered to explain why self-confidence, an inner-directed trait, was ranked as important by the employees sampled and cautiousness, an other-directed trait was not. Although the sampled individuals obviously felt that other-directed behavior was most important for success in their civil service positions, self-confidence may have been considered to be important because of their desire to perform well to obtain the next promotion. On the other hand, cautiousness, an other-directed trait, may have been considered unimportant in relation to the tenure system and job security present in the civil service system. As such, these individuals may not be concerned about continued employment.

The question of whether performance caused role perceptions also cannot be answered from these data. Correlational studies cannot determine cause-and-effect relationships. Further research is needed in this area to determine if ability, experience, or some other variable are factors which high inner-directed employees

¹¹ O.D. means other-directed behavior and I.D. means inner-directed behavior.

convert into performance more effectively than do low inner-directed employees. Another possibility and topic for research is whether performance does cause role perceptions through the feedback loops contained in Porter and Lawler's model (page 29).

As mentioned earlier, the results of the data on role perceptions tend to support both Porter and Lawler's model and Riesman's and Whyte's views on the place of other-directed behavior in American industry. This not a contradiction. The writings of Riesman and Whyte viewed managers, whereas this study examined lower-level, white-collar employees. As can be seen from Table 5-1, the employees surveyed overwhelmingly consider the exhibition of other-directed traits to be most important for success in their civil service positions. But those who rate themselves as high performers do tend to act with a greater amount of inner-directed behavior. This larger amount of inner-directed behavior by the high self-rated performers offers some support for Porter and Lawler's model by confirming Hypothesis P & L IV. Porter and Lawler have stated that the number of lower level, white-collar jobs has increased in many organizations.

As indicated, these low level jobs probably do demand more other-directed kinds of behavior, but. . . it would appear fallacious to assume that the increase in these jobs indicates that organizations demand or reward strongly other-directed behavior elsewhere in the organization. ¹²

¹²Porter and Lawler, op. cit., p. 118.

It can be interpreted from their above statement that Porter and Lawler would agree with the results of this study on role behavior. Therefore, based on the results of the present study, it can be generalized that other-directed traits are seen to be most important by the lower level, white-collar employees who participated in this study.

This chapter discussed the concept of inner-directed versus other-directed role perceptions and applied the findings to Porter and Lawler's model of motivation. Role perceptions were examined to determine their effect on self-ratings of quality of job performance and on self-ratings of effort. The next chapter will begin with a discussion of the historical role of pay and incentive pay plans in business organizations. The chapter will then examine the predictions of the Porter and Lawler model on pay satisfaction. The role of pay as a satisfier will be investigated as it affects self-ratings of performance and self-ratings of effort.

Chapter VI
Pay Satisfaction¹

The role of pay as a motivator has been under examination for many years. During the pre-classical management theory era, motivation was based on an "economic man" concept. Under this concept, it was thought that monetary incentives would bring out the best in a worker and that he would work harder to get more. The piece-rate system, or payment by results, provided such monetary incentives and was at the time, a major break with tradition.

Under classical management theory, the employee was still thought of as an "economic man" who was best motivated by money. Because of this view of the employee, financial incentives formed the motivational foundation of the classical management theory era. Believing in the economic man concept, organizations tried various types of pay plans in an effort to increase productivity.² Many of these plans did not produce the desired results. While some did lead to increases in production, many also led to employer-employee friction. In some cases employees practiced quota restriction and "goldbricking," while employers increased the rate

¹ This chapter can be related to Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill: Richard D. Irwin, Inc. and The Dorsey Press, 1968), pp. 56-97.

² Some of the more popular incentive pay plans included Henry Towne's gain sharing plan; Frederick Halsey's premium plan for paying for labor; Frederick Taylor's piece-rate system; and Henry Gantt's task work with a bonus.

of production required to earn the same amount of pay, or decreased the amount of the piece-rate paid on each piece produced. Workers sometimes withheld production because they feared unemployment from overproducing. In some instances, workers took advantage of their company's incentive pay plan by producing more and taking home more pay. This was dependent upon their regarding pay as important and seeing good performance as the means to achieve higher pay. In other instances, such good performance may have led employees to be labeled "rate-busters" with the corresponding reduction in esteem and friendship received from fellow employees. Therefore, Porter and Lawler see the positive motivational effects of pay, which was increased by increased productivity, as being canceled out by the negative effects of having other valued rewards (esteem and friendship) decreased.

The problems with incentive pay plans and the economic man concept have led to the search for other factors which influence productivity. The Western Electric studies³ uncovered the fact that an individual's productivity is influenced by factors other than solely financial ones. One of the most important of these factors was the employee's social relationships with his co-workers on the job. This discovery led to the "social man" theory of motivation and to the human relations or neo-classical movement. Since it was discovered that the worker was

³Fritz J. Roethlisberger and William J. Dickson, Management and the Worker (Cambridge, Mass.: Harvard University Press, 1939).

motivated by more than economic incentives, many incentive pay plans were abandoned. Motivation techniques during this period neglected to use pay as a motivator, despite the evidence of the Hawthorne studies that increased productivity in the case of the relay assembly group was partially a result of an incentive pay system.⁴

The "social man" of the human relations movement was soon replaced by the self-actualizing man of Maslow,⁵ Argyris,⁶ McGregor,⁷ and Herzberg.⁸ According to Porter and Lawler, Maslow's theory⁹ was the first to explain why incentive pay systems had failed and why pay may not be of primary importance to workers in our society. Maslow's 1943 theory stated that man's needs are arranged in a hierarchy of importance, ranging from the lowest need--physiological--to safety, social, esteem, and self-actualization. Once a need is fairly well satisfied, it becomes unimportant and

⁴Ibid., p. 133.

⁵Abraham H. Maslow, "A Theory of Human Motivation," Psychological Review, 50 (1943), pp. 370-396.

⁶Chris Argyris, Personality and Organization (New York: Harper and Brothers, 1957).

⁷Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill Book Company, 1960)

⁸Frederick Herzberg, Bernard Mausner, and Barbara Synderman, The Motivation to Work (New York: John Wiley and Sons, Inc., 1959).

⁹See Chapter I for a detailed explanation of Maslow's theory.

no longer motivates behavior. Man is then motivated by the next higher level of unsatisfied need.

The assumption made by many of the advocates of the self-actualizing man theory was that pay satisfied primarily lower level needs. If this is true, and if lower level needs are well satisfied for most individuals in our society, then it follows from the above discussion that pay is unimportant and therefore, this unimportance of pay may be one reason for the failure of incentive pay systems. Since Porter and Lawler's model is based on Maslow's theory, pay cannot be a motivator if it is unimportant. But as Porter and Lawler have stated, it is unimportant only if it is assumed to satisfy mainly lower level needs. In reality, monetary rewards through pay are thought to have appeal to higher level needs as well.

RESEARCH STUDIES

Porter and Lawler have contradicted the assumption that pay can satisfy only lower level needs by citing studies which have shown that pay is an incentive that can satisfy both lower and higher level needs. This opinion was also expressed in an article by McDermid.¹⁰ In viewing pay in this manner, Porter and Lawler see pay as the type of reward which

¹⁰Charles D. McDermid, "How Money Motivates Man," Business Horizons, 3, No. 4 (Winter, 1960), pp. 93-100.

has application to their model. They have interpreted pay to be a significant motivator in most cases. This interpretation holds regardless of why pay is important or the degree of importance placed on pay at different times.

As already discussed, pay has been useful as an incentive to increase productivity in some of its earlier applications. Later applications such as the Scanlon Plan¹¹ and Lincoln Electric's "incentive management"¹² have also met with success. Despite the success of some incentive pay plans, the number of companies using them has been declining for several possible reasons:

1. Incentive plans work well only when employees have some control over their work pace.
2. Many jobs cannot easily be measured with time studies.
3. Incentive pay plans can be a major source of employer-employee friction.
4. Loose standards make incentive pay plans costly.
5. Incentive pay may promote sloppy work.¹³

These are some of the same problems that have plagued incentive pay plans since their inception.

¹¹ Fred G. Leakeur, The Scanlon Plans (Massachusetts Institute of Technology: The Technology Press and New York: John Wiley and Sons, Inc., 1958).

¹² James L. Lincoln, Incentive Management (Cleveland: The Lincoln Electric Company, 1951).

¹³ Dean S. Ammer, Manufacturing Management and Control, (New York: Appleton-Century-Crofts, 1968), pp. 151-155.

If pay incentives are to function properly, they must meet at least three criteria.¹⁴ Workers must believe that the size of the bonus is large enough to be worth the extra effort they must put forth to obtain it. Workers must believe that the bonus is directly related to their performance and that it directly follows the completion of their assignments. The majority of workers who come under the bonus system must believe it to be equitable, since many of them will not produce enough to receive a bonus.

Porter and Lawler view the important question about pay as a motivator not in terms of whether or not incentive pay plans are effective motivators of increased performance, but in terms of what conditions make pay a significant motivator of increased job performance. The answer comes, they suggest, by comparing effective managers' attitudes about pay with those of ineffective managers. Their model requires two kinds of attitudes if pay is to serve as an incentive. First, pay must be important to the individual. Second, the individual must believe that a positive connection exists between performance and pay (rewards are contingent upon performance). If either of these two attitudes is lacking, then Porter and Lawler feel that 1) pay would not be an effective incentive; and 2) no relationship could be expected between pay importance and performance.

¹⁴ Daniel Katz and Robert L Kahn, The Social Psychology of Organizations (New York: John Wiley and Sons, Inc., 1966), p. 353.

HYPOTHESES

Porter and Lawler view studies by Georgopoulos, Mahoney, and Jones¹⁵ and by Herzberg, Masaner, and Snyderman¹⁶ as confirmation of their prediction that employees who see a close connection between pay and performance will be motivated toward good performance. Georgopoulos et al. found that employees with high self-ratings tended to view good performance as an aid in earning more pay. Herzberg et al. also considered the relationship between attitudes toward pay and job performance.

The theory of motivation advanced by Frederick Herzberg and his associates has been referred to as the motivation-hygiene theory, the motivation-maintenance model, the dual-factor theory, and the two-factor theory. The data for the original study were gathered from over 200 Pittsburgh accountants and engineers. These interviews sought to determine factors in the job which were present when the employees felt exceptionally happy or exceptionally unhappy with their jobs. From these interviews, a two-factor hypothesis was developed. This hypothesis

¹⁵ Basil S. Georgopoulos, G. M. Mahoney, and N. W. Jones, "A Path-Goal Approach to Productivity," Journal of Applied Psychology, 41 (1957), pp. 345-353.

¹⁶ Herzberg et al., op. cit.

suggested that:¹⁷

1. The factors that were present when job satisfaction was produced were separate and distinct from the factors that led to job dissatisfaction.
2. The opposite of job satisfaction is no job satisfaction--not job dissatisfaction.
3. Similarly, the opposite of job dissatisfaction is no job dissatisfaction--not job satisfaction.

The conclusion drawn from the interviews was that, in the majority of cases, reports of feeling happy were not brought about by the absence of factors that cause dissatisfaction, but instead by the presence of the factors the researchers classified as "satisfiers," "motivators," or "intrinsic factors."

The satisfiers relate to the content or nature of the job and describe the employee's relationship to what he does. These factors that lead to satisfaction include achievement, recognition, the intrinsic characteristics of the work itself, responsibility, and advancement. When these factors fall below an acceptable level, they contribute very little to job dissatisfaction, but do prevent job satisfaction. If a job does not offer an employee advancement, challenging work, responsibility,

¹⁷Frederick Herzberg, "The Motivation-Hygiene Concept and Problems of Manpower," in Herbert G. Hicks (ed.) Management, Organizations, and Human Resources: Selected Readings (New York: McGraw-Hill Book Company, 1972), p. 173.

recognition for a job well done, or the opportunity to complete a task successfully, he will not necessarily be dissatisfied with it, but neither will he derive any satisfaction from it.

Conversely, when feelings of unhappiness were reported, they were not brought about by the absence of the satisfier factors, but by the absence of "dissatisfiers," "maintenance," or "extrinsic" factors. Herzberg called these factors "hygiene" factors because "they act in a manner analogous to the principles of mental hygiene. Hygiene operates to remove health hazards from the environment of man. It is not curative; it is, rather, a preventive."¹⁸ Hygiene factors describe the employee's relationship to the context or environment in which he performs his work. Therefore, satisfiers relate to the nature of the job being performed, while dissatisfiers relate to the environment in which the job is performed. Dissatisfiers include company policy and administration, technical supervision, salary, interpersonal relations with the supervisor, and working conditions. When the hygiene factors fall below what the employee considers an acceptable level, he becomes dissatisfied. However, at or above the acceptable level, dissatisfaction is removed. This absence of dissatisfaction leads only to a neutral state, not to any degree of satisfaction. An employee who considers his job to have satisfactory pay, supervision, interpersonal relations, company policy, and working conditions will not be dissatisfied with it, but neither will he necessarily be satisfied with it.

¹⁸ Herzberg et al., The Motivation to Work, op. cit., p. 113.

Of particular interest to Porter and Lawler were the kinds of attitudes toward pay that the respondents in Herzberg et al. study saw as leading to high performance. They observed that

although salary tended to appear as both a satisfier and a dissatisfier, it was mentioned in a special way when it appeared as a satisfier and contributor to good performance. Specifically, it was mentioned as something that went along with a person's achievement on the job. "It was a form of recognition; it meant that the individual was progressing in his work." Thus in these situations, pay appeared to be satisfying higher--as well as lower--order needs.

Figure 6-1 illustrates how salary tended to be both a satisfier and dissatisfier. Porter and Lawler feel that those respondents in the Herzberg study who viewed pay as a satisfier saw pay and the "satisfiers" as being tied to performance. This implies that pay and the "satisfiers" are contingent upon job performance, or in terms of the Porter and Lawler model, are dependent upon one's effort to perform well. Interpreted in this way, Porter and Lawler view the results of the Herzberg et al. study, in regards to pay and performance, to be in agreement with, and predictable from their model. Thus, on the basis of the results of the Herzberg et al. study and the Porter and Lawler model, the first hypothesis relative to pay as a satisfier can be stated:

¹⁹ Herzberg et al., The Motivation to Work, op. cit., p. 113.

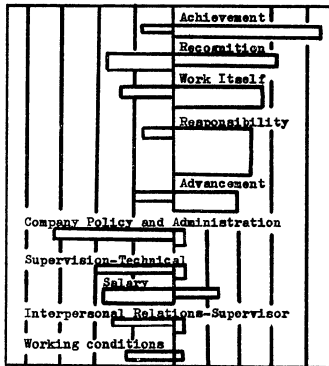


Figure 6-1. Herzberg's Satisfiers and Dissatisfiers.

The factors to the right can lead to employee satisfaction and motivation if they are present. Those factors to the left can lead to employee dissatisfaction if they are absent.

From Frederick Herzberg, "The Motivation-Hygiene Concept and Problems of Manpower," in Herbert G. Hicks (ed.) Management, Organizations, and Human Resources: Selected Readings (New York: McGraw-Hill Book Company, 1972), p. 175.

Hypothesis P & L VI: The more an individual sees his pay as a satisfier, the more effort he will put forth to perform his job effectively.²⁰

The above hypothesis views attitudes toward pay as a satisfier as reflections of how hard an individual will work (effort expended), instead of the actual quality of his job performance (actual accomplishment). Since effort is just one of several variables which affects performance (along with role perceptions and abilities and traits), the following hypothesis can be stated concerning the relationship between attitudes toward pay as a satisfier and performance:

Hypothesis P & L VII: Attitudes toward the degree to which pay is seen as a satisfier will be more closely related to the amount of effort an individual puts forth on his job than to the quality of his performance [actual accomplishment].²¹

Porter and Lawler's model predicts that the relationship between attitudes toward the perceived probability that pay depends upon performance and job performance will be stronger for those employees who consider pay important than for those

²⁰This is Porter and Lawler's Hypothesis 4-E, ibid., p. 66.

²¹This is Porter and Lawler's Hypothesis 4-F, ibid.

who consider it as unimportant. Hence, the relationship between attitudes toward pay as a satisfier and effective performance can be expected to be strongest for those employees who say pay is important to them.

Hypothesis P & L VIII: The relationship between an individual's attitudes toward pay as a satisfier and measures of actual performance and effort will be stronger for those individuals who say their pay is important to them than for those who say their pay is relatively unimportant to them.²²

PAY PROGRAM OF THE ORGANIZATION

The organization studied was under the Louisiana state civil service compensation system. Under this system, pay ranges were established for each job, and the ranges for all jobs were known by all employees. The pay plan for the classified positions studied was established by officials of the Louisiana state civil service system, and pay scale changes could only be effected by action of the Louisiana Civil Service Commission and approval of the governor. The personnel office at Louisiana State University maintained that "no merit step-increases are mandatory or automatic under Civil Service or University pay policies; and a step-increase is not to be granted to an employee whose performance is not fully

²²This is Porter and Lawler's Hypothesis 4-G, ibid., p. 67.

satisfactory."²³ But when performance was satisfactory, step-increases were given on a yearly basis and not necessarily tied to merit. Such a pay policy indicates that for the employees in the organization studied, rewards are not highly contingent upon performance. For these employees, job level, seniority, and experience were the most important determinants of pay.

ATTITUDE MEASURES

The degree to which individuals saw their pay as a satisfier was measured by the three items which comprised Section III of the questionnaire (see Appendix III). The employees were asked to indicate their agreement or disagreement with each of the three items on a five-point Likert-type scale. Table 6-1 presents the items and the degree of relationship among them as measured by Pearson product-moment correlation coefficients.

The substantial intercorrelations indicate that there is a high degree of homogeneity among the items. This suggests that the items are reliable and can therefore be combined into a composite measure of "pay as a satisfier." The index of pay as a satisfier was computed for each subject by summing his scores on the three items. Those with scores in the range of 10 to 15 were classified as having a high index of pay as a

²³"Classified Personnel Memorandum No. 7," Louisiana State University Personnel Office, June 5, 1973.

Table 6-1
CORRELATION AMONG ITEMS MEASURING DEGREE
TO WHICH PAY IS SEEN AS A SATISFIER
IN THE PRESENT STUDY

	No. 2 Rewards for Good Performance	No. 3 Recognition for a Job Well Done
1. For me, raises have meant that I was progressing in my work.....	.76*	.70*
2. The raises I have received were rewards for good performance.....		.73*
3. In my job, pay is a form of recognition for a job well done.....		

*p < .01

Adapted from Lyman W. Porter and Edward E. Lawler, III,
Managerial Attitudes and Performance (Homewood, Ill.:
Richard D. Irwin and The Dorsey Press, 1968), p. 70.

satisfier. Those with a composite score of 8 or less were classified as having a low index of pay as a satisfier. The respondents with a score of 9 were omitted from the analysis.

Question 5 in Section II of the questionnaire (see Appendix II) was included to measure satisfaction with and importance of pay. The question was as follows:

The pay for my civil service position:

- a) How much is there now?
(min) 1 2 3 4 5 6 7 (max)
- b) How much should there be?
(min) 1 2 3 4 5 6 7 (max)
- c) How important is this to me?
(min) 1 2 3 4 5 6 7 (max)

Since the present study does not examine the employee's satisfaction and fulfillment with his pay, only question "c" will be considered. The answers to this question constituted a measure of the perceived importance of pay, and is necessary to test the hypotheses in this chapter.

Questions 1 and 3 in Section IV of the questionnaire (see Appendix IV) were used to measure the quality of job performance and the amount of effort expended on the job. The questionnaire read in part:

The purpose of this section is to determine how you rate yourself relative to others in your organization with similar civil service duties. You will be asked to rate yourself for characteristics on a seven-point scale.

You are to circle the number on the scale that represents where you stand compared to others with similar civil service duties.

The questions which were used to measure accomplishment and the amount of effort expended were as follows:

- 1) Quality of your job performance.
(low) 1 2 3 4 5 6 7 (high)
- 3) Amount of effort you expend on the job.
(low) 1 2 3 4 5 6 7 (high)

TESTS OF THE HYPOTHESES

Hypothesis P & L VI stated that the more an individual sees his pay as a satisfier, the harder he will work to perform his job effectively. In order to test this hypothesis, the sample was divided into two groups. Individuals were placed in either the low or high pay-as-a-satisfier group based on their index of pay as a satisfier. Those with scores in the range of 10 to 15 were classified as having a high index of pay as a satisfier ($N = 146$). Those with a composite score of 8 or less were classified as having a low index of pay as a satisfier ($N = 93$). Individuals with scores of 9 were omitted from the analysis ($N = 19$). The mean of the self-ratings of the quality of job performance by the low pay-as-a-satisfier group (6.15) was compared with the mean of the same self-rating by the high pay-as-a-satisfier group (6.25). The relationship was not found to be statistically significant ($F = 2.68$, n. s.). A

comparison between the high and low pay-as-a-satisfier groups was again made, but this time using the means of the self-ratings on the amount of effort expended (mean: high = 6.35; low = 6.16). This time a statistically significant relationship was found ($F = 3.14$, $p < .05$).

Figure 6-2 shows that there is a tendency for high self-ratings on both effort and quality of job performance to be related to seeing pay as a satisfier. This is indicated by the increasing slope of the lines as they move from left to right. The results are in the expected direction, but only the difference between the high and low pay-as-a-satisfier groups for the self-ratings on effort are statistically significant (performance: $F = 2.68$, n. s.; effort: $F = 3.14$, $p < .05$). Nevertheless, the data do offer limited support for hypothesis P & L VI.

Hypothesis P & L VII predicted that the individuals' attitudes toward the degree to which pay is seen as a satisfier will be more closely related to the amount of effort they put forth on the job than to the quality of their job performance. The tests performed on Hypothesis P & L VI are valid for this hypothesis also. The data presented in Figure 6-2 are also relevant for this hypothesis and offer support for it. Individuals who belong to the high pay-as-a-satisfier group rate themselves higher in both quality of performance and effort expended than the low pay-as-a-satisfier group. As shown in this figure, the difference between the high and low pay-as-a-satisfier

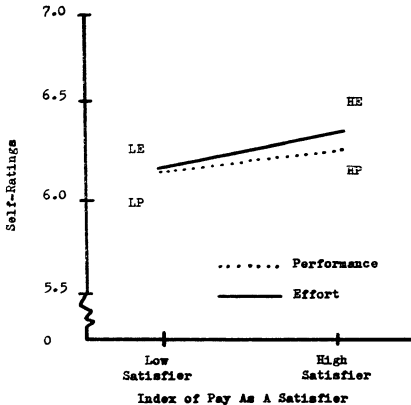


Figure 6-2. Mean self-ratings of job performance and effort for high and low satisfier groups.

N: Low Satisfier, Effort (LE) = 93; High Satisfier, Effort (HE) = 146; Low Satisfier, Performance (LP) = 93; High Satisfier, Performance (HP) = 146. Comparisons--LE (6.16) vs. HE (6.35): $F = 3.14$, $p < .05$; LP (6.15) vs. HP (6.25): $F = 2.68$, n. s.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 82.

groups is larger for the self-ratings of effort (high: 6.35 - low: 6.16 = .19; $F = 3.14$, $p < .05$) than for the self-ratings of quality of job performance (high: 6.25 - low: 6.15 = .10; $F = 2.68$, n. s.). In addition, the line representing the self-ratings of effort has a steeper slope, indicating that a stronger relationship exists for the self-ratings of effort than for the self-ratings of quality of job performance. Figure 6-2 also shows that the differences between the high and low pay-as-a-satisfier groups are not statistically significant on the self-ratings of performance ($F = 2.68$, n. s.), but are for the self-ratings of effort ($F = 3.14$, $p < .05$). Therefore the data do support the hypothesis that attitudes toward the degree to which pay is seen as a satisfier are more closely related to the amount of effort put forth than to the quality of job performance.

Hypothesis P & L VIII predicted that the relationship between an individual's attitudes toward pay as a satisfier and measures of actual performance and effort will be stronger for those who say their pay is relatively important to them. For purposes of testing this hypothesis, individuals were placed into high or low pay-as-a-satisfier groups based on their index of pay as a satisfier. The individuals in each of these groups were then divided into high or low pay importance groups based on their responses to the "How important is pay to you?" question. The mean of the responses (6.4) to this question served as the dividing point between the high and low pay importance groups.

Therefore, high and low pay importance groups were obtained for the low pay-as-a-satisfier group as well as for the high pay-as-a-satisfier group. The differences between these groups were then tested based on either their quality of job performance or on the amount of effort expended.

Figure 6-3 presents the data relative to the performance aspect of this hypothesis. While the slope of the line representing the relationship between the index of pay as a satisfier and self-measures of job performance for the high importance group is in the predicted direction [mean of the high pay-as-a-satisfier group (6.32) is above the mean of the low pay-as-a-satisfier group (6.12)], the results are not statistically significant ($t = .22$, n. s.).

Figure 6-4 presents the data relative to the effort aspect of Hypothesis P & L VIII. Again the data offer no support for the hypothesis. While the slope of the line representing the relationship between the index of pay as a satisfier and self-measures of effort for the high importance group is in the predicted direction [mean of the high pay-as-a-satisfier group (6.26)], the relationship is stronger for the low importance group. The difference between the low and high pay-as-a-satisfier groups is larger for the low pay importance group (high: 6.35 - low: 6.00 = .35, $t = 0.57$, n. s.) than for the high pay importance group (high: 6.34 -

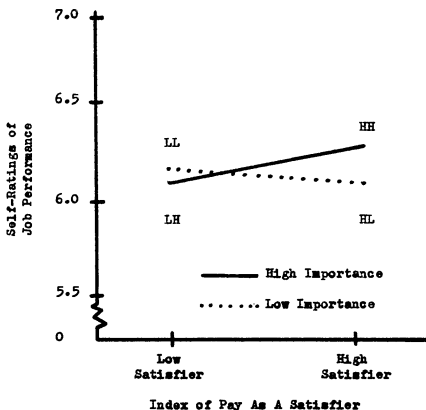


Figure 6-3. Mean self-ratings of job performance for high and low pay-as-a-satisfier groups with two levels of pay importance.

N: Low Satisfier, Low Importance (LL) = 37; High Satisfier, Low Importance (HL) = 54; Low Satisfier, High Importance (LH) = 56; High Satisfier, High Importance (HH) = 91. Comparisons--LL (6.17) vs. HL (6.11): $t = -0.13$, n. s.; LH (6.12) vs. HH (6.32): $t = 0.22$, n. s.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 84.

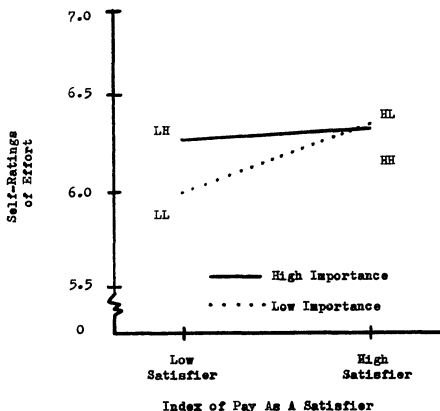


Figure 6-4. Mean self-ratings of effort for high and low pay-as-a-satisfier groups with two levels of pay importance.

N: Low Satisfier, Low Importance (LL) = 37; High Satisfier, Low Importance (HL) = 54; Low Satisfier, High Importance (LH) = 56; High Satisfier, High Importance (HH) = 91. Comparisons--LL (6.00) vs. (6.35): $t = 0.57$, n. s.; LH (6.26) vs. HH (6.34): $t = 0.08$, n. s.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 86.

low: $6.26 = .08$, $t = 0.08$, n. s.). Hence, on the basis of these data, Hypothesis P & L VIII must be rejected.

DISCUSSION OF FINDINGS

The evidence from this study indicates a tenuous relationship existing between the degree to which pay is seen as a satisfier and the motivation to perform effectively. Since the relationship between pay as a satisfier and self-ratings of performance was in the predicted direction (high ratings of pay as a satisfier was accompanied by high self-ratings of performance), the results could be taken as support for the Herzberg et al. theory and the Porter and Lawler model. However, the relationship was not statistically significant ($F = 2.68$, n. s.) and the data do not offer support for Hypothesis P & L VI.

The higher self-rating of performance by the high pay-as-a-satisfier group (Figure 6-2) implies that the perception of pay as a satisfier may have led to the self-ratings of job performance. However, this relationship is not statistically significant ($F = 2.68$, n. s.). In addition, the reader is reminded that the data gathered in this study do not allow for the testing of causal relationships between attitudes and performance. Just because a relationship exists between attitudes and self-ratings of performance, it is risky to assume that the attitudes caused the performance. Nevertheless, it seems reasonable to assume

that the perception of pay as a satisfier may have led to the job performance. This interpretation follows from Thorndike's law of effect²⁴ which sees an individual continuing in an activity which leads to the satisfaction of his needs.

Another line of reasoning is that performance caused attitudes or that a third variable may have caused both the attitudes toward pay as a satisfier and the quality of job performance to occur. The interpretation that performance caused attitudes is not supported by the findings of the tests on Hypothesis P & L VII. The attitudes toward pay as a satisfier were found to be more strongly related to self-ratings of effort expended ($F = 3.14$, $p < .05$) than to self-ratings of quality of job performance or accomplishment ($F = 2.68$, n. s.). Porter and Lawler see salary as this possible third variable. However, salary is not highly correlated with measures of job performance ($r = .26$, $p < .01$) or with attitudes toward pay as a satisfier ($r = .02$, n. s.). Hence, salary is not likely to be the third variable.

One possible reason for the lack of a statistically significant relationship between pay as a satisfier and self-ratings of job performance may be the result of the organization's reward system. In the civil service organization in the present study, rewards may not be perceived as being contingent upon performance. Employees

²⁴Edward Lee Thorndike, Animal Intelligence: Experimental Studies (New York: MacMillan, 1911).

may perceive rewards to be distributed randomly and as being contingent upon factors other than performance such as age and seniority. As a result of their study on reward systems, Cherrington, Reitz, and Scott found random reward systems to yield correlations between satisfaction and performance to be near zero.²⁵ In a random reward system, rewards are not distributed on the basis of performance, but both high and low performers may receive rewards. The present study found the following correlations between self-ratings of performance and the satisfactions reported for the five need areas in Maslow's hierarchy: (1) physiological: .057; (2) security: .041; (3) social: .010; (4) esteem: .021; and (5) self-actualization: -.050. Therefore, based on the Cherrington *et al.* finding that correlations between performance and satisfaction are near zero in organizations which use random reward systems, it can be concluded that rewards are not contingent upon performance in the civil service organization studied. Hence, the lack of a significant relationship between pay as a satisfier and self-ratings of performance may result from the employees' perception that rewards are not contingent upon performance.

Hypothesis P & L VIII predicted that the relationship between pay as a satisfier and measures of job performance and

²⁵David J. Cherrington, H. Joseph Reitz, and William E. Scott, Jr., "Effects of Contingent and Noncontingent Reward on the Relationship Between Satisfaction and Task Performance," Journal of Applied Psychology, 55, No. 6 (December, 1971), pp. 531-536.

effort would be stronger for those individuals who said that pay was important than for those who said it was relatively unimportant. This hypothesis was not supported. Porter and Lawler offered two possible explanations why it may not have been. First, the measure of pay importance may be different from the measure of the importance of pay as a satisfier. As such, seeing pay as a satisfier means that pay is related to more than just effort or performance. Other rewards such as fringe benefits, time off, number and size of raises and frequency of promotions may be tied to pay also, and in order to have an adequate measure of importance, it is necessary to measure the importance of all these rewards, not just the importance of pay. Pay may also be related to seniority, or experience. Support for this interpretation comes from the low correlations between salary and self-ratings of performance ($r = .26, p < .01$) and between salary and self-ratings of effort ($r = .13, p < .05$). These correlations indicate that there exists a good deal of unexplained variance in basing salary on performance or effort. The correlations between salary and age ($r = .49, p < .01$) and between salary and time in the civil service ($r = .59, p < .01$) indicate that salary is more related to seniority or to experience. Hence, the employees in this study do not perceive a contingent relationship between pay and performance in their organization.

The data indicate that salary is more strongly related to actual accomplishment or quality of performance ($r = .26$) than to the amount of effort expended on the job ($r = .13$). This is a justifiable basis for determining salary. The actual accomplishment of a task is more important to a firm than the amount of effort their employees expend in working toward the goal. In some cases, a large amount of effort may be expended without producing the desired results. Firms are financially rewarded by individuals and other firms for the quality of their performance or actual accomplishment, and these data indicate that the organization surveyed is perceived as likewise rewarding its employees more for the quality of their performance or accomplishment than for the amount of effort expended. Nevertheless, these data also indicate that salary is more strongly related to seniority or experience (time in civil service service: ($r = .59$) than to self-ratings of performance ($r = .26$). This would imply that the organization surveyed rewards its employees more for their seniority than for their performance. However, the data gathered in this study do not allow testing for causal relationships. Therefore, it is risky to assume that salary leads to seniority or seniority leads to salary. The amount of salary paid could entice employees to remain in the organization, thereby gaining seniority or experience. Another possibility is that one of the basis on which the employees are paid is seniority and experience. However, since dissatisfaction with

pay is relatively high (2.12 when 0 indicates complete satisfaction), it is reasonable to eliminate the possibility that salary acts as an incentive to get employees to remain in the organization to gain experience and seniority. Therefore, it follows that seniority and experience are likely to be one of the factors which leads to the higher salaries. Since salary is more strongly related to seniority and experience ($r = .59$) than to self-ratings of performance ($r = .26$) or self-ratings of effort ($r = .13$), it is reasonable to assume that seniority and experience are rewarded more in the organization surveyed than either performance or effort.

The other explanation offered for the lack of support for this hypothesis is that for pay to be seen as a satisfier, it must be important. The importance of pay is the "necessary condition" by which pay can be seen as a satisfier. If pay is unimportant to an employee, there is no chance that pay can be seen as a satisfier. If pay is considered important, the importance would only serve to separate individuals on the degree to which they see pay as a satisfier. Porter and Lawler have stated that "it is obvious that before an adequate measure of the importance of pay as a satisfier can be developed, further understanding is needed of what it means, in terms of the various psychological needs, for pay to be seen as a satisfier."²⁶

²⁶Porter and Lawler, op. cit., p. 91.

The findings of this chapter may have been limited by the methods used to divide the sample (based on their self-ratings) into low versus high performance groups, effort groups, pay-as-a-satisfier groups, and pay importance groups. The means of pay importance and of the self-ratings of performance and of effort served to divide the respondents into low versus high groups. For the pay as a satisfier variable, a composite score was computed for each respondent based on his answers to Section III of the questionnaire (Appendix III). Those with a composite score of 8 or less were classified as having a low index of pay as a satisfier, whereas those with a score of 10 or above were classified as having a high index of pay as a satisfier. For all four groups discussed above, perhaps a division based on the top and bottom third of the responses for each area would have yielded more clearly separated high and low groups.

The findings of this chapter affect Porter and Lawler's model as shown in Figure 6-5. Porter and Lawler's model predicts that value of rewards and perceived effort-reward probability combine to influence effort. Effort then is presumed to combine with abilities and traits and role perceptions to influence performance. According to Porter and Lawler, when the value of a potential reward is high, effort should also be high. This relationship was not found to totally exist in the present study. Employees who saw pay closely related to effort expended rated themselves higher in effort than did employees who had a lower perception of the

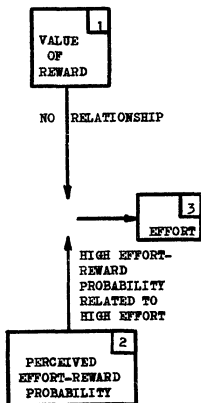


Figure 6-5. Modifications of Porter and Lawler's theoretical model of motivation based on the findings of Chapter VI.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 165.

effort -reward probability. The data also confirm the model's prediction that perceived effort-reward probabilities are more related to effort than to performance. Nevertheless, no difference was found to exist in the relationships between perceptions of pay based on self-ratings of performance or self-ratings of effort for the degree of importance attached to pay. This finding rejects Porter and Lawler's contention that both value of reward and perceived effort-reward probability are involved in determining effort.

This chapter discussed the relationships of pay as a satisfier to self-ratings of effort and self-ratings of performance as they applied to Porter and Lawler's model. The concluding chapter applies the findings of this study to refute or verify Maslow's hierarchy of need theory. In addition, the findings are used to test the general pattern of relationships suggested by Porter and Lawler's model. This chapter also describes the implications of these findings for management and defines areas for future research.

Chapter VII

Conclusion

Chapters III-VI have reported the findings of this study in detail. Therefore, this chapter will not attempt an extensive review of these results. The focus of this chapter will be on the validity of Maslow's hierarchy theory¹ and Porter and Lawler's model of motivation² for lower level, civil service employees. As stated in Chapter I, the objective of this study is to add to existing knowledge in the field of organizational behavior by viewing the perceived needs and attitudes of classified, white-collar, Louisiana State University, civil service employees toward certain characteristics of their civil service positions. This study offers empirical evidence to refute or verify Maslow's hierarchy of needs theory. In addition, this study tested certain hypotheses of the Porter and Lawler model of motivation on rank and file employees. The results of this study, as they apply to Maslow's theory, will be examined first, and then Porter and Lawler's model will be evaluated based on the data gathered in this study. This chapter will also consider the limitations of this study and areas for further research.

¹Abraham H. Maslow, "A Theory of Human Motivation," Psychological Review, 50 (1943), pp. 370-396.

²Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968).

MASLOW'S THEORY

The hypotheses, data, and findings relating to Maslow's hierarchy of needs theory are found in Chapter III. That chapter utilized Maslow's theory to investigate: (1) whether a need hierarchy existed for the civil service employees in the study; (2) the degree of importance that the sample placed on each of the needs in Maslow's hierarchy; and (3) the degree to which the needs in Maslow's hierarchy are fulfilled and satisfied on the job. In addition, the importance which the sample placed on the needs in Maslow's hierarchy while in the civil service system was compared with the perceived importance which would be placed on Maslow's needs if the sample were in private industry.

The findings (Table 3-2) indicate that the employees studied rank importance of needs similar to the rankings in Maslow's hierarchy (1. physiological: 6.23; 2. security: 6.12; 3. social: 5.90; 4. self-actualization: 5.86; 5. esteem: 5.70). This ranking by importance indicates that the employees surveyed are at a low stage in their need development since the lower level needs are considered most important while the higher level needs are considered least important.

For these employees, pay was rated as very important (6.40) with a low level of pay satisfaction (2.17) and a low perceived opportunity for fulfillment (4.03). A possible explanation for these findings is that for the employees in this study, pay was

seen as contributing to the satisfaction of needs at all levels.³ Physiological needs could be satisfied through the buying power of money. Security needs could be viewed in terms of financial security—life insurance, health insurance, retirement plans, and savings accounts. Social needs could be indirectly satisfied by purchasing membership in social organizations. The actual acceptance by peers or the receiving of friendship may not result. Pay could also satisfy esteem needs as a measure of recognition, status, or achievement. At the self-actualization level, pay could only serve to remove the hinderances to self-actualization so a person could work toward continuing his self-development.

These findings have certain implications for management. According to Maslow's 1943 theory, as lower level needs are relatively satisfied, they become less directly motivating for behavior. One is motivated mainly by the next level of unsatisfied need. Thus gratified needs, in a sense, disappear. They are no longer motivating. Since any manager attempts to influence human behavior, he must consider what needs are relatively unsatisfied, and hence can serve as levers for motivation. The findings of this study indicate to civil service managers those needs which are unsatisfied for the civil service employees studied

³Charles D. McDermid, "How Money Motivates Men," Business Horizons, 3, No. 4 (Winter, 1960), pp. 93-100.

who occupy clerical positions (physiological: 2.50; self-actualization: 1.65; esteem: 1.38) and can be viewed as motivators according to the Maslow conceptualization. Through the use of a similar study at a later time, civil service managers could determine if those needs which are presently unsatisfied have remained unsatisfied.

Now that the aggregate need hierarchy of the employees in this study is known (1. physiological; 2. security; 3. social; 4. self-actualization; 5. esteem), civil service managers could formulate their organization's personnel policies for clerical workers. On the basis of these findings, compensation programs and promotion plans could be designed to satisfy needs which the employees in this sample feel are important. McDermid⁴ would suggest that since the employees surveyed consider lower level needs to be of primary importance, great emphasis could be placed on base pay. Base pay is an effective motivator:

at lower need levels since the gratification of physiological and safety needs is largely dependent on buying outside sources of satisfaction. When a man is motivated by these needs, he can be controlled by the granting or withholding of money . . . But at higher levels in the hierarchy, the situation is more complicated.⁵

Hence, the compensation program should be flexible in order to serve the needs of its employees at a particular time, thereby achieving maximum motivation at the lowest possible cost. When

⁴McDermid, op. cit., pp. 93 - 100.

⁵Ibid., p. 96

this goal is fulfilled, the satisfaction of new need areas could be concentrated upon.

This research found that the employees in this study do not consider higher level needs to be as important on the job as lower level needs (Hypothesis I). Such a finding can be interpreted as suggesting that some of the employees surveyed do not seek to satisfy higher level needs on the job, therefore, they do not consider them to be important. This interpretation implies a cause-and-effect relationship. The "cause" may be the lack of a desire to satisfy higher level needs on the job and the "effect" may be that the jobs are not structured to allow the satisfaction of higher level needs on the job. Argyris⁶ agrees with the belief that all employees do not seek to satisfy higher level needs on the job by stating that employees do not tend to see the organizational context as a place to express important needs. Dubin also agrees by suggesting that the results of his studies imply that "the factory as a locale for living out a lifetime seems clearly secondary to other areas of central life interests."⁷ Therefore, based on the

⁶Chris Argyris, "The Individual and Organization: Some Problems of Mutual Adjustment," in Studies in Organizational Behavior and Management, ed. by Donald E. Porter, Philip B. Applewhite, and Michael J. Mieshauk, 2nd ed. (Scranton, Pa.: International Textbook Company, 1971), pp. 580-581.

⁷Robert Dubin, "Industrial Workers' Worlds: A Study of the 'Central Life Interests' of Industrial Workers," Social Problems, 3, No. 3 (January, 1956), p. 135.

writings of Argyris, Dubin, and Kuhn, Slocum, and Chase,⁸ it is possible that the central focus of some people's lives is not the job (which is merely a way of getting a living), but the home of the community. Some people may find a full measure of challenge, creativity, and autonomy in raising a family, pursuing a hobby, or taking part in community affairs. For these people, the satisfaction of higher level needs while on the job is probably not very important. By concluding that the job should be the primary mode of need satisfaction for all of the employees in this study, civil service managers might err by neglecting economic motivation which some employees actually consider very important. Conversely, the use of only economic incentives would neglect those employees who are motivated by higher level needs and are desirous of intrinsic rewards. Therefore, it is suggested that civil service managers who supervise employees in positions similar to those studied not concentrate on only one incentive to motivate their employees. McDermid suggests that managers should:

1. . . . not rely exclusively on further increases in wages and security benefits to motivate employees, once adequate wages and benefits have been established.
2. . . . create conditions conducive to a man's satisfying his social and esteem and self-realization needs on the job.⁹

⁸David G. Kuhn, John W. Slocum, Jr., and Richard B. Chase, "Does Job Performance Affect Employee Satisfaction?", Personnel Journal, 50 no. 6 (June, 1971), p.459.

⁹McDermid, op. cit., p. 96.

While the findings of this study do support Maslow's theory in terms of a hierarchy of needs based on importance, the 1943 theory's prediction of a decrease in the strength of a given need following its satisfaction was not supported (Hypothesis II). Maslow's 1943 theory states that when the safety needs are largely satisfied, not only does the importance of the social needs increase, but also the importance of the safety needs decreases. Similar decreases are asserted to occur at all levels upon gratification at those levels. In short, "a satisfied need is not a motivator."

The data indicate that this relationship did not exist for the sample studied. Satisfaction of physiological, esteem, and self-actualization needs were perceived to be more strongly related to the importance of these respective needs than to the importance of the next higher level need (Table 3-1). In order for Maslow's 1943 theory to be supported, it was necessary for the satisfaction of needs to be negatively related to their respective importances. Such a negative relationship occurred for the security and social needs, but these relationships were not statistically significant. The existence of a two-level hierarchy consisting of lower level (physiological, security, and social needs) and higher level (esteem and self-actualization) needs was also investigated (Hypothesis I). No support was found for this hierarchy either.

The findings from Hypothesis II do support Maslow's later theory¹⁰ which states that for growth motivated people, gratification of higher level needs leads to increased, not decreased motivation. The data shown in Table 3-1 indicate that the satisfaction of both higher level needs--esteem and self-actualization--correlates positively and significantly with their respective need importances. The correlation coefficient between the satisfaction of the esteem need and its importance is $r = .155$, $p < .05$. The correlation coefficient between the satisfaction of the self-actualization need and its importance is $r = .149$, $p < .05$. Therefore, the findings do offer some support for Maslow's later theory.

The findings of this study indicate that Maslow's theory is not universally applicable to the group of employees studied. When the occupational system to which the employee belongs is considered, there appears to be a varying degree of conformity to Maslow's hierarchy. The important characteristics of private industry which led clerical workers in Beer's study¹¹ to consider self-actualization and autonomy needs most important must differ from the characteristics of the civil service system which led clerical workers in the present study to consider lower level or deficiency needs most important. A possible interpretation of

¹⁰ Abraham H. Maslow, Toward A Psychology of Being (Princeton, N. J.: D. Van Nostrand Company, Inc., 1962), p. 28.

¹¹ Michael Beer, "Needs and Need Satisfaction Among Clerical Workers in Complex and Routine Jobs," Personnel Psychology, 21, No. 2 (Summer, 1968), pp. 209-222.

these findings was suggested earlier in this chapter. Perhaps the civil service employees in this study look off the job for satisfaction of their higher level needs more than do the employees in Beer's study. Another possible explanation for the differences between the findings of the two studies may be related to the type of needs measured and the measuring instruments. The present study measured physiological needs whereas the Beer study did not. In measuring physiological needs, the present study investigated the adequacy of the sample's income to clothe, house, feed, and tend to the medical and dental needs of the employees and their families. While the questions were designed to measure the above items in terms of physiological needs, perhaps the items were viewed in terms of esteem needs by the respondents. The clothes a person wears, the house he lives in, the food he eats, and the doctors who attend him are at times considered measures of recognition and achievement when viewed by others as well as by himself. Hence, when the researcher thought he was measuring physiological needs, perhaps esteem needs were actually being measured. Therefore, if this possibility actually occurred, there is less difference between the findings of the present and the Beer studies.

The perceived need importance if employed outside of the civil service system to present civil service employees was also investigated. The results are shown in Figure 3-1. The security,

social, and esteem needs were considered to be more important in the civil service setting than if in private industry. However, the physiological and self-actualization needs were perceived to be more important if in private industry. It may be suggested, in Maslow's terms, that the security, social, and esteem needs would be less important if in private industry because it may be perceived that private industry would do a better job at satisfying them than the civil service system does. Therefore, according to Maslow, the importance of these needs would decrease as they become satisfied. The feeling that physiological needs would be more important if in private industry may follow from the importance placed on physiological needs in the civil service system. This need ranks first in need importance, but last in perceived opportunity for need satisfaction (fulfillment) and last in actual need satisfaction (Table 3-2). These data indicate that regardless of the occupational system, physiological needs are still important motivators. This idea is explained by McGregor's generalization that "Man is a wanting animal."¹² The more a person gets, the more he wants. This is an unending process which continues throughout life.

¹²Douglas McGregor, The Human Side of Enterprise. (New York: McGraw-Hill Book Company, 1960), p. 36.

PORTER AND LAWLER MODEL¹³

This section will take a broad view of Porter and Lawler's motivational model for managers in relation to the findings obtained in the present study on lower level, white-collar, civil service employees. The general pattern of the relationships suggested by the model will be viewed to determine if they are supported by the data. Generally, the findings do not confirm the pattern of relationships implied by the model. The variables which Porter and Lawler presumed to affect performance did not show relationships to self-ratings of performance, nor did the variables they presumed to result from performance appear to be related to self-ratings of performance.

The first part of the Porter and Lawler model (page 29) considers the relationships between the value of reward, perceived effort-reward probability, and effort variables. Chapter VI contains the data relevant to these variables. Data on the value of reward variable was obtained by means of question 5c in Appendix II which deals with the importance of pay to the employee. Data on the perceived effort-reward probability was gathered by means of the three questions in Appendix III. These data indicated how closely the employee felt his pay was related to his performance.

¹³ This section can be related to Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), 159-184.

Data on effort and performance were obtained by means of self-ratings. One of the limitations of this study is that only self-ratings were utilized to measure quality of performance and effort. This limitation was placed on the methodology by the personnel office of the organization whose employees were sampled. Possibly more valid measures of performance and effort would have been ratings by superiors or peers or objective measures. Porter and Lawler's model predicts that value of rewards and perceived effort-reward probability combine to form motivation which influences effort. Effort then is presumed to combine with abilities and traits and role perceptions to influence performance. According to Porter and Lawler, when the value of a potential reward is high, and when the perceived effort-reward probability is high, effort should also be high. This relationship was not found to totally exist in the present study (see Figure 7-1). Employees who perceived pay as being closely related to effort expended rated themselves higher in effort than did employees who had a lower perception of the effort-reward probability. The data also confirm the model's prediction that perceived effort-reward probabilities are more strongly related to self-ratings of effort than to self-ratings of performance. Nevertheless, no difference was found to exist in the relationships between perceptions of pay based on self-ratings of performance or self-ratings of effort for the degree of importance attached to pay. This finding rejects Porter and

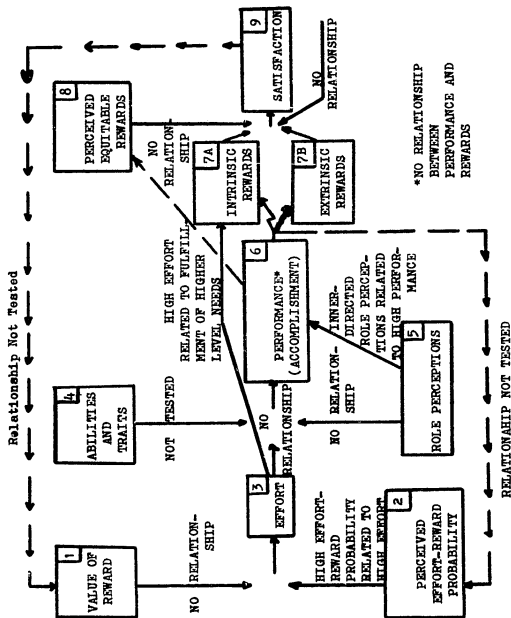


Figure 7-1. Modifications of Porter and Lawler's theoretical model of motivation based on the findings of the present study.

Adapted from Lyman W. Porter and Edward E. Lawler, III, Managerial Attitudes and Performance (Homewood, Ill.: Richard D. Irwin, Inc. and The Dorsey Press, 1968), p. 165.

Lawler's contention that both value of reward and perceived effort-reward probability are involved in determining effort. Figure 7-1 illustrates that no statistically significant relationship was found to exist between the value of reward variable and the self-ratings of effort or performance variables (relationship between perceptions of pay based on self-measures of performance or of effort for the degree of importance attached to pay). The study also found that only high effort-reward probability was related to high self-ratings of effort.

Effort, ability, role perceptions, and performance are the next variables which are implied to interact in the model. These results are presented in Chapter V. Effort and performance were measured by self-ratings. Role perception data were gathered by means of the questions appearing in Appendix V. No information was gathered on ability. Porter and Lawler state that effort, ability, and role perceptions combine to determine performance. The results indicate that employees with high inner-directed cluster scores rated themselves higher in performance than employees with low inner-directed cluster scores. However, the results show that the relationship between role perceptions and self-ratings of performance are no stronger for employees who report themselves as expending a large degree of effort compared to those who report themselves as expending a relatively small degree of effort. Therefore, Porter and Lawler's assumption of a combined effect of effort and role perceptions on performance is not supported for self-ratings,

while role perceptions acting alone were found to affect self-measures of performance.

Porter and Lawler's model also considers the relationships between performance, rewards (fulfillment), perceived equitable rewards, and satisfaction. The data for these variables are presented in Chapter IV. Rewards (fulfillment) were measured by means of the first question for each of the items in Appendix II. These questions sought to determine "how much" fulfillment the employees were obtaining for the various need categories. Perceived equitable rewards were measured by the second question ("should be") in Appendix II. Satisfaction was measured by taking the difference between these two questions. Porter and Lawler state that perceptions of fulfillment should be related to perceived performance differences if the organization gives differential rewards for differences in performance. An employee who actually is perceived by the organization (not just by his own self-measures) to be a better performer than his peers should perceive rewards to be contingent upon performance if the organization does in fact give differential rewards for differential performance. However, perceptions of fulfillment do not lead directly to satisfaction but are modified by perceived equitable rewards. Therefore, if a good performer is not perceived by the organization as being a good performer, or if his organization does not give differential rewards for differential performance, the good performer will probably be dissatisfied. If the organization rewards high and low performers equally, Cherrington,

Reitz, and Scott state that the correlation between satisfaction and performance would be near zero.¹³ The results of this study indicate that no relationship exists between self-ratings of performance and perceived feelings of fulfillment nor between self-measures of performance and satisfaction. The results also indicate that self-ratings of effort are more closely related to fulfillment for the esteem and self-actualization needs than are self-measures of performance, and about as equally related to fulfillment for the lower level needs as are self-ratings of performance. These findings could have been expected as a result of the findings of the Porter and Lawler study. They found little relationship between actual salary and job performance in the government sample.¹⁴

The implications for management derived from the findings on the Porter and Lawler model are somewhat similar to those suggested from the results of this study on Maslow's theory.

¹³David J. Cherrington, H. Joseph Reitz, and William E. Scott, Jr., "Effects of Contingent and Noncontingent Reward on the Relationship Between Satisfaction and Task Performance," Journal of Applied Psychology, 55, No. 6 (December, 1971), p. 535.

¹⁴Porter and Lawler, op. cit., p. 154

Organizations should determine the perceived probabilities their employees have for obtaining the rewards available to them in relation to the required amount of expended effort. If the employees have a low effort-reward probability, management may desire to re-evaluate the requirements of the task or the standards. Management should take steps to enforce the perception that rewards are more directly related to performance or accomplishment. While most organizations probably claim that they reward their employees on the basis of merit, in actuality they may be rewarding on the basis of seniority, experience, or personal relations with the supervisor. Organizations that give either formal or informal rewards that are not seen to be contingent upon performance may be omitting a potential motivational device for improved performance. They may also be missing a chance to satisfy some of their employees' important needs. Other rewards, in addition to pay, should also be used to reward differences in performance. Job security, recognition for a job well done, participation in decision making, time off, status symbols in terms of a fancy desk or office, parking spot with his name on it, and satisfaction of higher level needs all fall in this category. In order for organizations to discriminate between good and poor performers, they must devise and use methods which can make an accurate discrimination. In addition, employees must believe that high levels of performance do lead to high levels of rewards.

Another area which requires the attention of managers is assessing whether the employee correctly understands where to apply his effort. Attention is usually devoted to increasing the amount of effort expended without questioning the direction of such effort. Porter and Lawler imply that organizations may get improved performance from their employees by focusing attention on role perceptions without requiring an increased amount of effort. The goal of increased performance without increased effort may be achieved through the process of "management by objectives." This process is essentially a method of work planning, review, and appraisal in which a subordinate and his superior mutually determine their objectives on the job.

The assumptions are that this increases a subordinate's knowledge and understanding of his job and improves communication between superior and subordinate. Through interaction and discussion with his superior, a subordinate can determine precisely what is expected of him, thus reducing the frustration and anxiety resulting from ambiguity about job expectations. Theoretically, increasing a subordinate's involvement in the goal-setting process increases his work motivation, and helps integrate the objectives of the individual and the organization by giving him some say concerning the organizational objectives to which he is expected to contribute.¹⁵

¹⁵ Alan C. Filley and Robert J. House, Managerial Process and Organizational Behavior (Glenview, Ill.: Scott, Foresman and Company, 1969), p. 143.

LIMITATIONS OF THE STUDY

It is possible that the findings of this study are influenced by the limitations of the sample studied, the measuring instrument used to gather the data, and the data analysis methods employed. Each of these areas will be explored to determine if they could have influenced the findings.

Sample

The population consisted of 652 classified, white-collar, state civil service employees of Louisiana State University. The population consisted of account clerks, accountants, clerks, personnel technicians, stenographer clerks, accountants, and miscellaneous professional and office personnel. The response rate for the total sample was 39.6 per cent. As may be expected with the type of positions surveyed, 95 per cent of the respondents were females. The findings of this study may be limited as a result of the types of positions which the employees in the sample occupy. Many of these positions do not contain very challenging tasks or permit the autonomy or independent thought which is usually considered to contribute to gratification of higher level needs. Therefore, the routine and repetitive nature of work in the types of positions surveyed may limit the findings of this study.

Questionnaire

The questionnaire used to measure attitudes may be a limitation of this study. The questions may have appeared ambiguous or

emotionally loaded to some of the respondents. In addition, it may be possible that the only employees who returned their questionnaires had strong feelings toward either extreme. Some employees may have given responses which they felt were sought by the researcher even though they were erroneous. The use of questionnaires did not allow the researcher to probe into a respondent's answers to determine the respondent's true feelings, but forced the respondent to answer the question based on the available choices listed on the questionnaire.

The present study used questionnaires to gather its data since the Louisiana State University personnel office would approve only questionnaires mailed to their employees' homes as the means of data collection. Any instrument which took time away from the performance of duties, such as interviews, was not approved.

Data Analysis Methods

The present research was a correlational study. This allowed the relationship between two variables to be focused upon, but only at a fixed point in time. The study could not directly prove the existence of cause-and-effect relationships. An experimental study in which the experimenter could produce changes in one variable in order to observe the effects on a second variable would have established the existence of any cause-and-effect relationships. However, the personnel department at Louisiana State University would not have allowed the survey of its employees unless it was

by a questionnaire mailed to their homes. Such a restriction eliminated the possibility of establishing cause-and-effect relationships through the use of an experimental study and necessitated the use of a correlational study.

The findings of this study may have been limited by the methods used to divide the sample (based on their self-ratings) into low versus high performance groups, effort groups, pay-as-a-satisfier groups, and pay importance groups. The means of pay importance and of the self-ratings of performance and of effort served to divide the respondents into low versus high groups. For the pay as a satisfier variable, a composite score was computed for each respondent based on his answers to Section III of the questionnaire (Appendix III). Those with a composite score of 8 or less were classified as having a low index of pay as a satisfier, whereas those with a score of 10 or above were classified as having a high index of pay as a satisfier. For all four groups discussed above, perhaps a division based on the top and bottom third of the responses for each area would have yielded more clearly separated high and low groups.

The F- and t-tests used in this study as tests of statistical significance may have limited the findings of this study. Tests of significance are subject to Type I and Type II errors. With a significance level of .05, a Type I error could occur 5 times out of 100 if the researcher believes he has something when in fact

he does not. Type II errors occur when the researcher says that his data do not really mean anything when in fact they do.

One of the areas most likely to have influenced the findings of this study was the sole reliance upon self-ratings of performance and of effort to measure quality of job performance and amount of effort expended on the job. It is possible that some employees would automatically rate their quality of performance and amount of effort higher than they would rate others on these factors. Evaluations of performance and effort may have been more accurate if ratings by superiors or peers had been obtained. However, the personnel office of Louisiana State University would not have supplied the researcher with the name of each employee's superior or with the names of his co-workers, nor was the researcher allowed access to the files of that office. Such a restriction eliminated the possibility of utilizing the ratings of peers or superiors on performance and effort of the employees in this study.

AREAS FOR FUTURE RESEARCH

This study was designed to offer empirical evidence on Maslow's hierarchy of needs theory and to test certain hypotheses of the Porter and Lawler model on rank and file employees. In so doing, areas for future research were uncovered. The research on Maslow's theory could be broadened by conducting the same research on the same sample in a number

of years. Such a longitudinal study would permit the changes in need fulfillment, satisfaction, and importance to be observed. It can be argued that Maslow's theory is best tested with change. Increases in lower level need satisfaction require changes in higher level need importance along with changes in lower level need importance.

Another area for further research is the setting in which an employee's need satisfaction primarily occurs. For the employees surveyed, their higher level needs did not appear to be as important as lower level needs while on the job. These people may not have their "central life interests" on the job, but may look to the family, community, or a hobby for satisfaction of higher level needs. In order to determine if their central life interests are on or off the job, Dubin's Central Life Interest¹⁶ questionnaire could be administered to the sample surveyed. Analyses could then be performed to determine the relationship between fulfilled higher level needs on the job, and job and workplace as the central life interest.

Additional research is also possible on the Porter and Lawler model. Data are needed to determine how changes in levels of need satisfaction are feedback to affect the value of rewards variable. Data are also needed to determine how increases or decreases in the relationship between performance and rewards affect the

¹⁶ Dubin, op. cit.

effort-reward probability. Porter and Lawler state that the most important research need for their model is evidence on the direction of causality. Possibly the longitudinal study suggested above could provide such data.

One variable included in Porter and Lawler's model which went untested in the present study is ability. Future research should devise methods of measuring ability and determining its relationship with effort and role perceptions in influencing performance. In addition to measuring ability, more sophisticated and accurate measures of all variables would permit more precise testing of the Porter and Lawler model, both on managers and non-managers.

Porter and Lawler tested their model on managers in both state governments and private industry. The present study applied their model to lower level, white-collar employees of a state government and found results quite different from those uncovered in Porter and Lawler's study. Perhaps a study of the model applied to lower level employees in government utilizing ratings of performance and effort by superiors as well as self-ratings might serve to link the two studies.

From the above areas for further research, it can be seen that it is possible and beneficial to refine and improve Maslow's hierarchy of needs theory and Porter and Lawler's model of motivation.

Even now, without further research, Maslow's theory and Porter and Lawler's model can be used to gain insights into the relationships between attitudes and performance.

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APPENDIX I

Section I: The purpose of this section is to gather certain personal data on you to help with the statistical analysis of your answers.

1. Check only one: a) ☐ male without dependents
b) ☐ male with dependents
c) ☐ female without dependents
d) ☐ female with dependents
2. Age on your last birthday _____
3. Education (check one):

<input type="checkbox"/> some high school	<input type="checkbox"/> college
<input type="checkbox"/> H. S. diploma	<input type="checkbox"/> some graduate work
<input type="checkbox"/> some college	<input type="checkbox"/> master's degree
<input type="checkbox"/> business college	<input type="checkbox"/> Ph.D. degree
4. Approximately what is your monthly salary from your position before taxes and other deductions? _____
5. Time in present position: _____ years
6. Total time in civil service: _____ years
7. Position Title: _____

8. From which of the below situations did you enter civil service:

<u>Check</u>	a) _____ school
<u>Only</u>	b) _____ another job
<u>One</u>	c) _____ military
	d) _____ housewife
	e) _____ unemployment

9. How many civil service examinations had you taken before you accepted your first civil service position? _____
10. Did you accept the first civil service position that was offered? Yes _____
No _____
11. Are you a supervisor: Yes _____
No _____

Please check that you answered all questions

APPENDIX II

Section II: In the following section will be listed several characteristics or qualities connected with your civil service position. For each such characteristic, you will be asked to give three ratings.

- a) How much of the characteristic is there now connected with your civil service position?
- b) How much of the characteristic do you think should be connected with your civil service position?
- c) How important is this position characteristic to you?

Each rating will be on a seven-point scale, which will look like this: (minimum) 1 2 3 4 5 6 7 (maximum)

You are to circle the number on the scale that represents the amount of the characteristic being rated. Low numbers represent low or minimum amounts, and high numbers represent high or maximum amounts. If you think there is "very little" or "none" of the characteristic presently associated with the position, you would circle numeral 1. If you think there is "just a little", you would circle numeral 2, and so on. If you think there is a "great deal" but not a maximum amount, you would circle numeral 6. For each scale circle only one number.

Please do not omit any scales.

1. The feeling of self-respect a person gets from being in my civil service position:
 - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7

2. The feeling that my civil service income allows me to adequately house and clothe myself and my family:
 - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7

3. The opportunity in my civil service position to do work that is challenging and yet that is easy enough for me to do a decent job at it:
 - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7

4. The opportunity to get all the help and supervision I need:
 - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7

5. The pay for my civil service position:
 - a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7

6. The authority connected with my civil service position:
- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7
7. The opportunity for personal improvement and development in my civil service position:
- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7
8. The feeling that my civil service income allows me to adequately feed myself and my family, and to tend to our medical and dental needs:
- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7
9. The prestige of my civil service position inside the civil service system:
- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7
10. The opportunity for independent thinking and action in my civil service position:
- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
 - b) How much should there be? 1 2 3 4 5 6 7
 - c) How important is this to me? 1 2 3 4 5 6 7

11. The feeling of security in my civil service position:

- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
- b) How much should there be? 1 2 3 4 5 6 7
- c) How important is this to me? 1 2 3 4 5 6 7

12. The feeling of self-fulfillment a person gets from being in my civil service position (that is, the feeling of being able to use one's own unique capabilities, realizing one's potentialities):

- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
- b) How much should there be? 1 2 3 4 5 6 7
- c) How important is this to me? 1 2 3 4 5 6 7

13. The prestige of my civil service position outside the civil service system (that is, the regard received from others not in the civil service system):

- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
- b) How much should there be? 1 2 3 4 5 6 7
- c) How important is this to me? 1 2 3 4 5 6 7

14. The feeling of worthwhile accomplishment in my civil service position:

- a) How much is there now? (min) 1 2 3 4 5 6 7
- b) How much should there be? 1 2 3 4 5 6 7
- c) How important is this to me? 1 2 3 4 5 6 7

15. The opportunity, in my civil service position, to give help to other people:
- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
- b) How much should there be? 1 2 3 4 5 6 7
- c) How important is this to me? 1 2 3 4 5 6 7
16. The opportunity, in my civil service position, for participation in the determination of methods and procedures:
- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
- b) How much should there be? 1 2 3 4 5 6 7
- c) How important is this to me? 1 2 3 4 5 6 7
17. The opportunity, in my civil service position, to participate in the setting of goals:
- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
- b) How much should there be? 1 2 3 4 5 6 7
- c) How important is this to me? 1 2 3 4 5 6 7
18. The opportunity to develop close friendships in my civil service position:
- a) How much is there now? (min) 1 2 3 4 5 6 7 (max)
- b) How much should there be? 1 2 3 4 5 6 7
- c) How important is this to me? 1 2 3 4 5 6 7

Please check that you circled 54 answers

APPENDIX III

Section III: In the section below, you will see a series of statements designed to measure your attitude about the pay you receive in your present job. Please indicate your agreement or disagreement. Use the scale below each statement.

For example: It is easier to work in cool weather than in hot.

Strongly Agree X Undecided Disagree Strongly Disagree

If you think it is easier to work in cool weather, put an X above "agree"; if you think it is much easier to work in cool weather, put a mark above "strongly agree". If you think it doesn't matter, put a mark above "undecided", and so on. Put your mark in a space, not on the boundaries.

There are no right or wrong answers. We are interested in your opinion about the statements which follow.

1. For me, raises have meant that I was progressing in my work.

Strongly Agree Agree Undecided Disagree Strongly Disagree

2. The raises I have received were rewards for good performance.

Strongly Agree Agree Undecided Disagree Strongly Disagree

3. In my job, pay is a form of recognition for a job well done.

Strongly Agree Agree Undecided Disagree Strongly Disagree

Please check that you marked 3 answers

APPENDIX IV

Section IV: The purpose of this section is to determine how you rate yourself relative to others in your organization with similar civil service duties. You will be asked to rate yourself for characteristics on a seven-point scale which will look like this:

(low) 1 2 3 4 5 6 7 (high)

You are to circle the number on the scale that represents where you stand compared to others with similar civil service duties. If you think you are low on the characteristic, you would circle the numeral 1. If you think you are a little less than average as compared with others with similar civil service duties, you would circle the numeral 3, and so on. For each scale, circle only one number.

1. Quality of your job performance.

(low) 1 2 3 4 5 6 7 (high)

2. Your productivity on the job.

(low) 1 2 3 4 5 6 7 (high)

3. Amount of effort you expend on the job.

(low) 1 2 3 4 5 6 7 (high)

Please check that you circled 3 answers

APPENDIX V

Section V: The purpose of this part of the questionnaire is to obtain a picture of the traits you believe are most necessary for success in your present civil service position.

Below is a list of 12 traits arranged randomly. Rank these 12 traits from 1 to 12 in the order of their importance for success in your present civil service position.

For example, if you thought "Intelligent" was the most important trait for success in your present civil service position, you would put the number "1" in the space in front of "Intelligent." If you thought "Efficient" was the second most important trait, you would put the number "2" in front of "Efficient," and so on until the last space that is left would get the number "12," since it is the least important trait in your estimation.

IMPORTANT

1. Number 1 stands for the most important, and 12 for the least important trait.
2. Be sure that each space is filled by a different number, corresponding to your rank of the trait.

Traits to be ranked (from 1 to 12)

_____ Efficient
_____ Forceful
_____ Cooperative
_____ Adaptable
_____ Imaginative
_____ Independent
_____ Cautious
_____ Intelligent
_____ Self-confident
_____ Agreeable
_____ Decisive
_____ Tactful

Please Check: Have you used all the numbers from 1 to 12?

APPENDIX VI

Section VI: The purpose of this section of the questionnaire is to determine the importance you would place on certain characteristics of positions in private industry were you to leave the civil service system in the future. Please indicate how important these characteristics would be to you in reaching a decision to leave the civil service system. This can be done by using the seven-point scale below each characteristic, which looks like this:

(unimportant) 1 2 3 4 5 6 7 (important)

You are to circle the number on the scale that represents the importance of the characteristic being rated. Low numbers represent low or unimportant characteristics. If you think you would consider a given characteristic as unimportant in reaching a decision to accept a position outside of the civil service system, you would circle the numeral 1. If you think it is "just a little" important you would circle the numeral 2, and so on. For each scale circle only one numeral.

Please do not omit any scales.

1. Knowledge that my work will be laid out for me and I know just what is expected of me.
(unimportant) 1 2 3 4 5 6 7 (important)
2. Feeling that my income will allow me to adequately clothe, feed, and house myself and my family.
(unimportant) 1 2 3 4 5 6 7 (important)
3. Opportunity to think up some new ways of doing things and solving problems in the course of my work.
(unimportant) 1 2 3 4 5 6 7 (important)
4. Opportunity to have as much freedom as I want on my job.
(unimportant) 1 2 3 4 5 6 7 (important)
5. Feeling that my work will result in benefits to many people.
(unimportant) 1 2 3 4 5 6 7 (important)
6. All the opportunity I might want in my work to direct others.
(unimportant) 1 2 3 4 5 6 7 (important)
7. Feeling that I have done a good job according to my own standards.
(unimportant) 1 2 3 4 5 6 7 (important)
8. All the opportunity I want for making friends and enjoying the company of my fellow workers.
(unimportant) 1 2 3 4 5 6 7 (important)
9. Feeling that in my work I will always get the credit I deserve for any work I do.
(unimportant) 1 2 3 4 5 6 7 (important)
10. The feeling that health and accident insurance, retirement plans, vacations, and holidays will be adequate for my needs.
(unimportant) 1 2 3 4 5 6 7 (important)
11. The feeling that my job will be a secure one.
(unimportant) 1 2 3 4 5 6 7 (important)

Please check that you circled 11 answers.

from: Office of Personnel Services

October 15, 1973

to: Employees


Mr. Frederick H. Cain of the management department of Louisiana State University has asked for and received the cooperation of this department in assisting him in gathering data for his dissertation research.

This department has reviewed the enclosed questionnaire and approved it for distribution to the employees to be surveyed. As a classified, white-collar, civil service employee, you are asked to cooperate by completing the enclosed questionnaire.

No one connected with this department or the civil service system will see the completed questionnaires or know how any one individual has responded. All responses will go directly to Mr. Cain.

To insure complete anonymity, the questionnaires are being mailed directly to your home with an enclosed postage-paid envelope so that you can mail the completed form directly to Mr. Cain.

The success of this research depends upon each questionnaire being completed as honestly as possible and returned for analysis, so please cooperate.


Evans L. Roberts, Jr.
Director of Personnel Services

APPENDIX VIII

As a classified, white-collar, civil service employee at Louisiana State University, you are requested to take a few minutes to complete this questionnaire. The purpose of this study is to gather information from civil service employees concerning their attitudes toward certain elements of their civil service positions.

Your answers on this questionnaire will in no way affect your civil service position since the information gathered will be used in writing a dissertation for the doctorate degree in management by a student at LSU.

No one connected with the civil service system will see the completed questionnaires or know how any one individual has responded. Your completed questionnaire should be mailed directly to the researcher in the envelope enclosed by November 15, 1973.

This is not a study of individual persons or of individual departments, but of civil service employees as a professional group. Do not sign your name. There are no "trick" questions. Your opinion is the only right answer. All that is asked is that you try to answer as honestly and candidly as possible.

The questionnaire is numbered in order that a follow-up letter can be sent to those individuals who fail to respond initially.

On the following pages you will find several different kinds of questions. Specific instructions will be given at the beginning of each section of the questionnaire.

I sincerely hope that you will cooperate in filling out the questionnaire. The success of this study depends upon getting a maximum number of completed questionnaires returned.

VITA

Frederick H. Cain was born on July 5, 1943, in Pascagoula, Mississippi. His primary and secondary education was obtained in the Public School System of New Orleans. Under a Naval Reserve Officer Training Corps Scholarship, he entered Tulane University in 1961 where he attended for two years. In 1963, he joined A. S. Aloe Company, a division of Brunswick Corporation as a customer service representative.

In 1965, Mr. Cain enlisted in the United States Marine Corps, receiving his commission as a Second Lieutenant in 1966, at which time he also was designated a Naval Aviator. He served a tour of duty in Viet Nam from 1967-1968 as a helicopter pilot. After returning from Viet Nam, Mr. Cain was stationed at the Naval Air Station in Pensacola, Florida. There he was promoted to Captain and served as primary flight instructor until his discharge from the Marine Corps in 1969.

He returned to Tulane University and graduated in 1970 with the degree of Bachelor of Business Studies. He then entered Louisiana State University in New Orleans where he received the Master of Business Administration degree in 1971. He enrolled in the doctorate program at Louisiana State University in 1972 where he taught Management Principles as a Graduate Assistant in the Spring of 1973. The summer and fall months of that year were devoted to dissertation research and preparation

for General Examinations. In March of 1974, Mr. Cain joined the graduate faculty of Troy State University in Troy, Alabama as Assistant Professor of Management.

Since his discharge in 1969, Mr. Cain has remained active in the Marine Corps Reserves as a Captain and helicopter pilot. He is a member of Beta Gamma Sigma, Academy of Management, and Southern Management Association. In March of 1973, he married the former Geneva Walker.

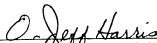
EXAMINATION AND THESIS REPORT

Candidate: Frederick Hilliard Cain

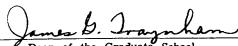
Major Field: Management

Title of Thesis: An Examination of Maslow's Need Hierarchy in a Civil Service Setting

Approved:

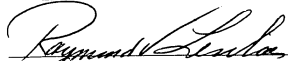


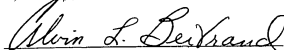
Major Professor and Chairman




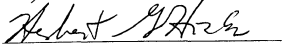
Dean of the Graduate School

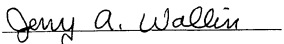
EXAMINING COMMITTEE:











Date of Examination:

September 3, 1974